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THE SPACE GAMER

THE MAGAZINE OF ADVENTURE GAMING

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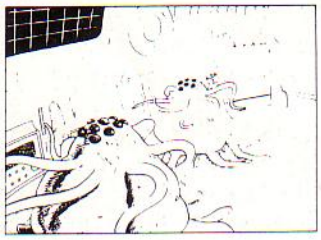

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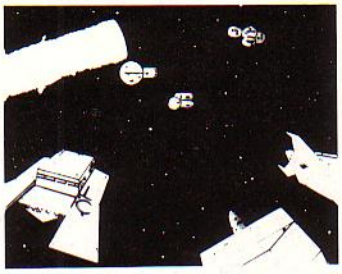

Amtik the god has a universe within him. But, believer and unbeliever battle inside in a Holy War. 3D tactics and a variety of ship types make this one of the most challenging tactical space games ever produced.

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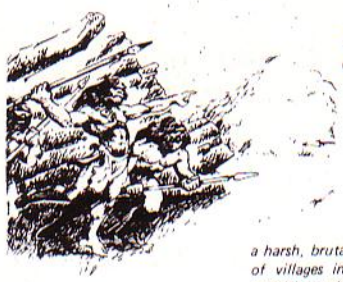

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HOT SPOT

War on a Molten Planet

The rebels are running, away and out of fuel. Chiros has the fuel factories but they float on "crustals" in a sea of molten lava. Can the rebels survive the heat and capture a crustal? Will help arrive in time? Will defenders melt rebel Ardor?

Ice War

Oil and Russia, these will cause the next war. The ESA, European Socialist Alliance, must smash our Alaskan oilfields. Their snow trained raiders try to elude sophisticated U.S. satellite defenses in a hide-and-seek strike at Prudhoe Bay.

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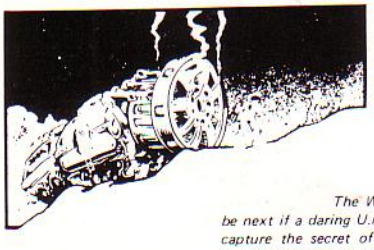
The U.N. Raid On Mars, 2206 A.D.



The Webbies have grabbed Mars! Earth will be next if a daring U.N. raid to crack the tunnels of Mars and capture the secret of the WebMind fails. Olympica covers the landing and close combat of the U.N. raid at the tactical level.

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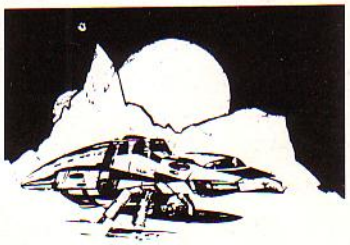

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THE SPACE GAMER

MARCH-APRIL 1980

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Specifications: ARTICLES should be double-spaced, typed on a 60-space line, on letter-sized paper. Please include the word count; put your name and address on the first sheet, and your name on each sheet. ART should be rendered in black ink (preferably India ink) on white paper. Art should be mailed FLAT, never rolled. Artists should work to 1, 2, or 3-column actual width where possible. Each individual piece of art should carry the artist's name and address on the back. *Please include a stamped, self-addressed envelope with every submission. We cannot promise to return material sent without an SASE.*

Cover art: Either science fiction or fantasy subjects are acceptable. We prefer full-color, finely-detailed paintings. Artists must use a vertical format, leaving room for the TSG logo and the list of contents, and should work on a light, flexible board if at all possible. Payment for cover art starts at $60.

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Where We're Going

Well, here it is. My first *Space Gamer.*

On the whole, I'm pleased with it. The material is useful and coherent, the art has something to do with the articles, and most of the pages are right-side-up. This issue keeps all the promises I made about what would be in the "new" TSG. I hope you like it.

The big news: TSG is going monthly. Next issue (28) will appear two months from now, in early May. No. 29 will come out in June – and from then on, it'll be a monthly magazine. That means we can use twice as many good articles, reviews, etc. . . . so send them in.

For those of you who aren't familiar with our policy and payments for submissions, take a look at the contents page. By the way, I've increased the payment we make for art by 50% . . . to $1 per column inch, which works out to $30 per page. And ALL articles – not just Metagaming-related ones – will now be paid for at a full cent a word.

Survey Prelims

Preliminary survey results are in (the whole thing will appear next issue). 253 responses had been received by February 28. We did a few simple breakdowns, and found that:

87.7% of the respondents were subscribers. The rest bought at stores, or borrowed other readers' issues.

70% tore off the back cover and mailed it in. The other 30% made a copy. (I think next year we'll put the survey in the center, so you can pull it out without damaging the magazine.)

21% didn't care whether or not TSG went monthly. Of those who DID care, a solid 80% – 4 out of 5 – wanted a monthly *Space Gamer*. Okay – you're getting it!

On reviews: The average rating for short reviews was 7.2 out of a possible 9. Long reviews rate a 6.2. So I know that the "everything we receive gets reviewed" policy is a good idea, if we can carry it off. I think we can.

And there was one other interesting result:

Lifetime Subscriptions

We asked what you thought a lifetime subscription to TSG (one payment, and you get TSG forever after) was worth. The responses averaged $241.40, assuming the magazine was monthly. So . . .

Effective immediately, we WILL be offering a lifetime subscription. For an even $250, you go on the subscription list permanently. Your subscription will not expire until you do (or TSG does). Hopefully, neither one of these will happen for a LONG time. If you want to support this magazine, think about a lifetime subscription.

I can't promise any specific fringe benefits for lifetime subscribers right now – but there will be some in the future (playtest opportunities on new games, etc.) Any such fringies will apply to all lifetime subscribers immediately, not just the new ones. Do it now and you'll miss the new rates.

Cost Increases

Effective this issue, the cover price of TSG goes up to $2. That's still cheaper than most of the competition. And effective May 15, subscription prices go up. All subscription orders received after that date will be pro-rated at the new per-issue rates. See the subscription ad on page 3 for more information.

Inflation – especially increasing paper costs – made some price increases necessary. I've tried to hold them down as much as possible.

One way to hold prices down is to shop very carefully for good deals. This issue was produced by a new printer. The overall cost was only a little more than it cost to print an issue last year (and a LOT less than it would have cost this year at the old printers!) And we got four extra pages in the bargain; this issue is 32 pages PLUS covers. If and when we increase the number of pages again, this new printer should make it easier.

Reader Ads

Another new item. Starting next month, we'll run "reader ads" – 20 words for $5 per insertion. Advertise for opponents, to buy or sell games, to get role-playing companions, play-by-mail foes – whatever. These ads are not open to game companies; they're for TSG readers only. I hope this turns out to be a worthwhile service.

The Fantasy Trip

TFT: In The Labyrinth is finally out. After two years . . . Whew. I'm not overly pleased with the way it finally was produced – neither am I ashamed of it. It is definitely not everything I wanted, but it's still (at least) an improvement in the state of the art. I'll be writing a lot about TFT next issue.

–Steve Jackson

Next Issue

"Wargame Design" – Part II. The historical background of wargaming.

Task Force Games: Steve Cole reports on what his company is doing.

1979 Game Survey results: What TSG readers think about practically everything.

SF/Fantasy Game Publishers: A look at the field, both new companies and old ones.

"The Fantasy Trip" – Steve Jackson's designer article, errata, and suggestions for play for TFT: "In The Labyrinth," "Advanced Melee," "Advanced Wizard," and "Tollenkar's Lair."

Writing for TSG: A complete guide to what we want, and how to get us to print it when you send it in.

If your subscription label says "27", this is your last issue of TSG. If it says "28" or "29", your subscription is about to expire. To re-subscribe, see page 3.

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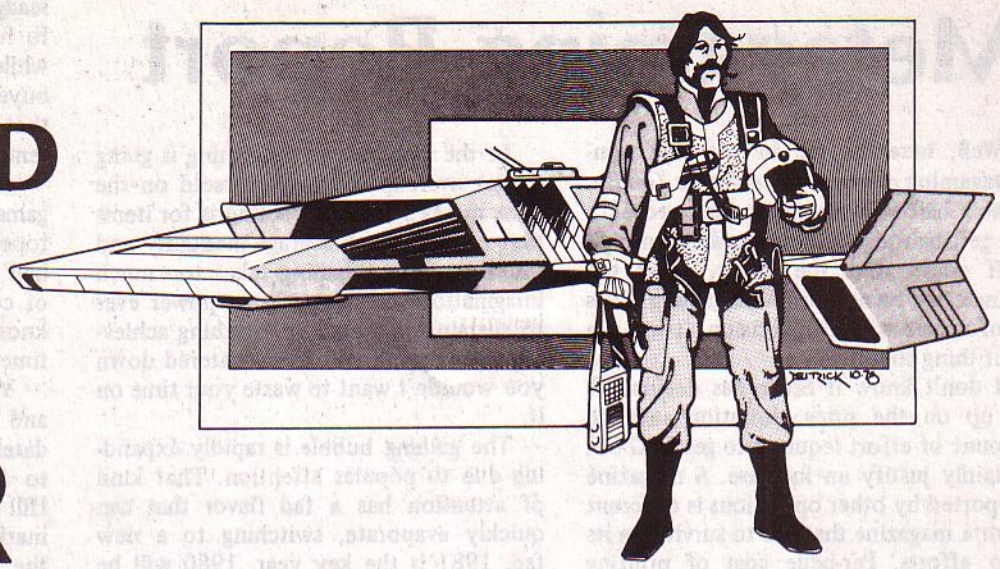

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After May 15, new rates will be in effect. These rates will probably be $21 for one year (12 issues) or $39 for two years (24 issues). Yes, that's right – TSG is going monthly. See "Where We're Going" in this issue.

Subscription checks received after May 15 will be applied to subscriptions at the new rates only (for instance, a $15 check will still be accepted, but will only get you nine issues). So get your SPACE GAMER subscription while the rates are still low – send your check today.

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Metagaming Report

Well, here we are in the first non-Metagaming issue of *The Space Gamer*. Steve's hair will no doubt have greyed a bit getting this issue out. Metagaming's staff won't miss the effort. After the change in ownership Metagaming feels comfortable with the decision; it was the right thing to do.

I don't know if Steve has decided to go up on the price. Inflation and the amount of effort required to get TSG out certainly justify an increase. A magazine supported by other operations is different from a magazine that has to survive on its own efforts. Per-issue cost of printing TSG rose by 30% in the last two years; the outlook for the next two is even worse. When a price increase comes, readers should accept it as an inevitability of the modern age.

Boxed Micros

Reaction to our plans to box all the micros in small packages has been good. It looks like a few more stores will carry them that way, which helps. The suggested retail price will go to $3.95. There will be full die-cut counters. Many of you actually prefer the plastic baggie; I do. It's convenient. However, people new to gaming look on plastic bags as a sign of a sleazy product. A box is more respectable, no matter the quality of the game.

The Fantasy Trip: In The Labyrinth should be in stores by the first week of March. The change from a box and complicated graphics work has cost five weeks. I'll never be gladder to get something get done and go out the door. It's been a hassle for over two years. I'll never be able to screw up enough courage to play it again. Well, maybe in a few years. That's a warning to all who want to publish games. It's the fastest way known to destroy personal gaming enjoyment. If you want your creations in print, do so as a free-lance designer, not as part of a company. The pay is lower but hassle is less and satisfaction greater.

Winds of Change

The gaming industry is going to experience continued rapid change. Media attention for Dungeons & Dragons, even negative attention, insures evolution of our little world. Hobby and toy industry buyers are beating the bushes for viable mass-market game lines. Everyone wants to get on the bandwagon.

In the next two years gaming is going to get overexposed and oversold on the mass market. Mass marketing is for items that can appeal to average mentality and interest groups. Gaming takes too much imagination and sheer brain power ever to sustain mass appeal. Anything achieving mass appeal will be so watered down you wouldn't want to waste your time on it.

The gaming bubble is rapidly expanding due to popular attention. That kind of attention has a fad flavor that can quickly evaporate, switching to a new fad. 1981 is the key year. 1980 will be frantic for companies with lots of games going out. 1981 will bring to buyers the realization that gaming, while profitable, can't sustain volume sales in the mass market beyond the initial interest surge. Some firms will undergo massive adjustments.

Weakness also plagues other firms. SPI has greatly damaged itself with hobby retailers by offering up to 40% discounts on mail orders. SPI seems to be positioning itself to rely more heavily on mail order with new ventures like *Ares*. This may have advantages but it could have been done without angering retailers. Angering established buyers when you don't have to has to count as a negative despite any offsetting pluses.

TSR Hobbies will emerge as the largest gaming firm if it can survive two hurdles. The first is a lawsuit by D&D co-copyright holder Dave Arneson. Loss of that case could have a major impact on the way TSR does business. TSR's second hurdle is the risk associated with moving to mass market outlets such as K-Mart. Such mass market exposure may be an unsustained flash in the pan necessitating readjustments later. TSR also wasn't able to fully supply established hobby buyers while supplying the larger market. Those buyers felt a bit abandoned, a problem that can be overcome but is at least a temporary weakness.

Avalon Hill is virtually unassailable in game lines and marketing. They know the ropes. All AH needs is something with half the appeal of D&D to surge far ahead of competitors. With their expertise and knowledge, it should only be a matter of time until they find it.

Yaquinto, Game Designer's Workshop, and Metagaming are emerging as candidates for major company status. Yaquinto is competing head-on with Avalon Hill in the maximum quality boxed game market, a tough challenge. Yaquinto has the backing of a major printer, named Yaquinto interestingly enough, as does AH. It will be interesting to see these two slug it out. AH should easily win, based on games that have a better play and long-term appeal.

Game Designer's Workshop is perhaps a real sleeper. Their product line, in packaging, price, and appeal, is well-positioned. Their design quality is well regarded. Their profit margins must be more than adequate. About all they lack is an aggressive marketing program to fully exploit their strengths. Again, it is only a matter of time.

1979 Hindsight

That brings us to Metagaming. Metagaming is pursuing a more concentrated strategy than any other middle-sized or large firm. We are the low-priced guys. We don't try to compete in every market as a day-to-day activity. 1979 showed us, with our boxed game problems, that we should stick to what we do best for a while longer. Once that was decided, it made it easier to figure out how to fit everything into less expensive packages. A limited strategy has weaknesses. But, our choice was to feel very strong in at least one area rather than be average or weak in a lot of areas. As we get bigger we can select a single new market area to concentrate on and become strong there. By 1981 the results will be in.

Howard Thompson – Metagaming

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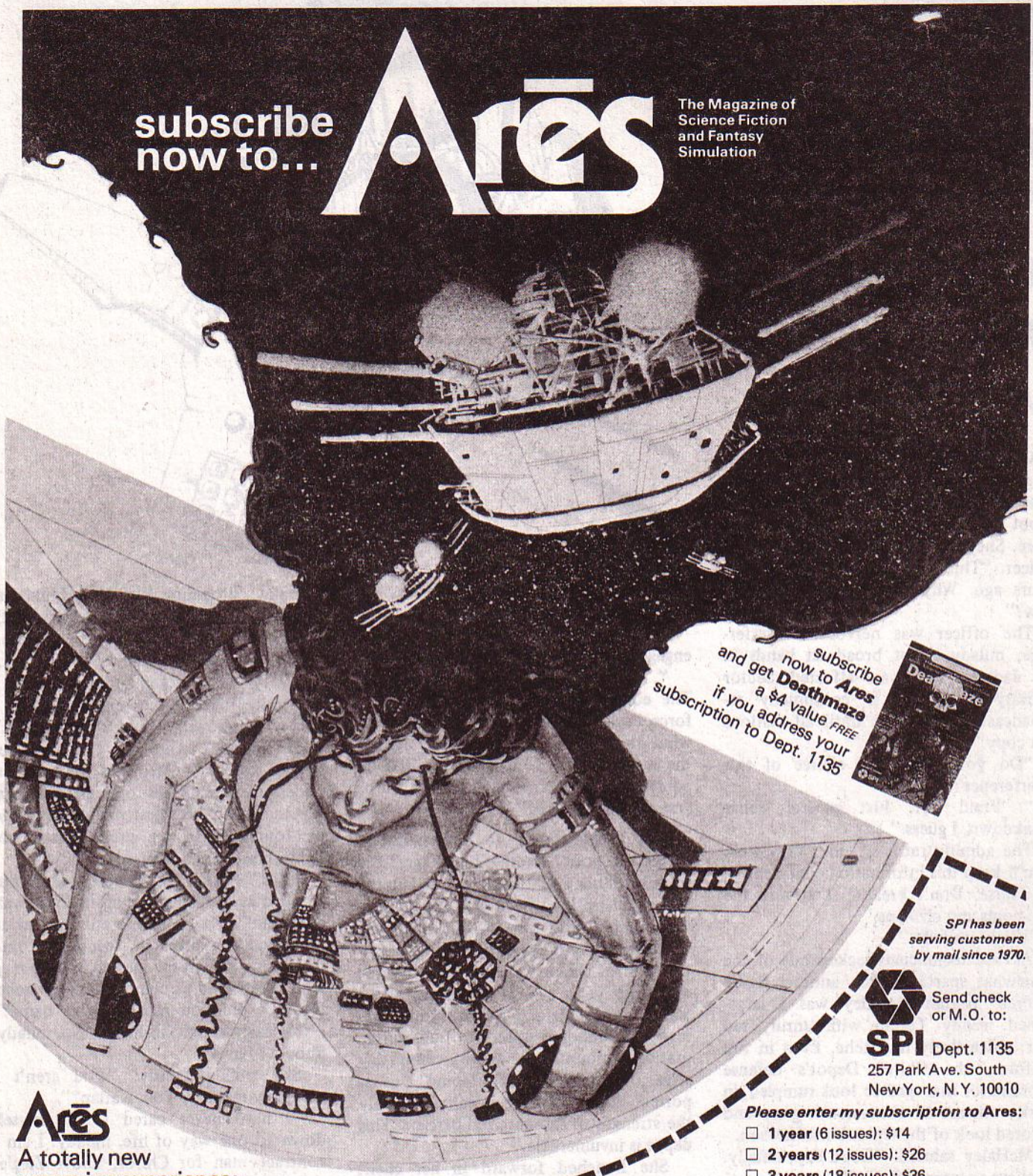

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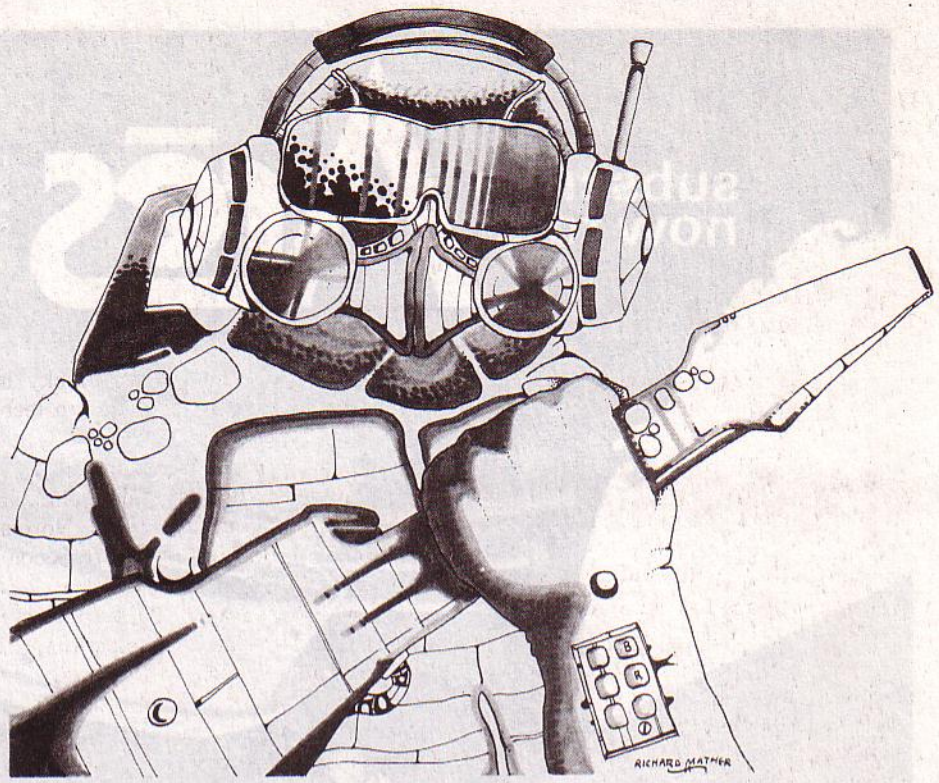
HOT SPOT:

a designer's introduction

by W.G. Armintrout



Colonel B. W. "Bobbie" Hawson, Ziegler Corporation administrator under lease for the Confederation military fuel depot on Chiros, read the dispatch once more. She turned to the communications officer. "This message was sent eighteen hours ago. Why didn't I get it before now?"

The officer was nervous. "Interference, milady. Most broadcast bands in the Jadreke sector are affected. Sector Military Command is continually rebroadcasting the alert until all stations can copy."

"Do you know the source of this interference?"

" 'Fraid not. Just general stellar breakdown, I guess."

The administrator sighed. "Very well. You'll keep this information confidential, of course. Don't breathe it around the non-coms and civilians."

"Right, milady."

As the technician backed out of the somewhat spartan office, another figure entered. Karlan McHaley was a large-boned, ruddy Terran with unruly red hair and a lively mustache. Even in full uniform, the Chiros Depot's defense coordinator managed to look rumpled, in stark contrast to the smooth grace and tailored look of the Ophir-born Hawson.

McHaley saluted. "Good day, milady. I believe you sent for me."

"Yes, commander. Come in. I have a dispatch which should interest you." Hawson handed him the sheet.

After some moments, the Terran grunted. "So some radicals stole a few battlewarps and headed in this direction. So what? The fleet lost them parsecs ago – they could be headed anywhere in this sector." He returned the paper.

Hawson tapped her desk nervously. "You brush that off mighty easily, McHaley. 'A few battlewarps'? There are elements of three separate Confederation fleets in that force. . . "

" . . . mostly destroyed in the Infulgar engagement," interjected McHaley.

". . . but still they have battlewarps! The equivalent of at least a small task force, fully staffed and crewed. Look what they did at Infulgar, even against the weight of the Grand Fleets – fifteen percent losses, including the capitalwarps *Jericho* and *Livicho*!"

The soldier began to look irritated. "Well and good, colonel, but it has little to do with our situation here. You are the senior scientific officer and the administrator of Chiros, milady, but I beg you to defer to my judgment in military matters. Chiros Depot was built two hundred and forty years ago, at the height of the Valdurian Incursion. At one time over seventeen hundred warcraft of all configurations mounted a twenty-seven day seige. Do you recall the outcome? Unsupported, the depot held out alone on only the strength of its energized barriers. This depot is invulnerable."

She hunched forward in her chair. "Technologies change, commander. What if they bypass our barriers? Craft are faster now, able to maneuver beneath our screens. There are chinks in our armor."

Karlan McHaley seemed to be fighting an urge to laugh. "On Chiros? This hellhole of heat and radiation? Our enemy would have to come to the surface to get under our barriers. Nothing could survive."

". . . but . . . "

"And, might I add," continued McHaley, drowning out his administrator's reply, "this is all highly hypothetical, since we are only one of a hundred possible worlds in the rebels' path!"

"Very well, Commander McHaley." She settled back in here chair, still with a concerned frown. "You're the expert."

He stood. "And don't forget our ground forces – Mengales mercenaries, under private contract to Ziegler Corporation, some of the finest private guards to be found. Plus our orbital patrol of fightercraft. Am I excused, milady?"

"Yes." Karlan turned to the door, but stopped as she called out again. "No, wait a second." The administrator was again staring at the dispatch, seeming to find something new in the message. "This man who is reported as commanding the rebel force – did you recognize his name?"

McHaley shook his head. "No, milady. Should I have?"

She smiled faintly. "You aren't a company man, are you, Karlan?"

"I have never cared to tie myself down to one way of life, milady. I am a contract man for Chiros, under Ziegler direction."

"Ah, yes," she said. "This man here – Jared Mondurial, Technocrat Grand Admiral – he, umm, used to work for the Corporation. In fact, he was a senior vice president in Home sector. A very powerful man. I worked with him several years ago, on the Stelladium project on Jerrsal IX. Of course, that was before he was found guilty of illegal political practices. Then he dropped out of sight."

"He sounds like a businessman. Not a soldier."

"You're probably right, commander. Just a businessman. But Jared is a survivor, and I pray that neither of us will have to stand in his way. A man like that might just walk all over our careful little strategies. I want all of our armed forces on immediate standby, with an extended patrol of the entire system. I want to be ready, McHaley."

The armed forces director saluted. "Very well, milady."

* * *

HOT SPOT: War on a Molten Planet is about the Technocrat raid on the Chiros fuel depot. In case anyone is keeping track, it happens to be my first-to-be-designed but second-to-be-published microgame. I've put these notes together to say a few things I thought folks might like to know about HOT SPOT – how it got put together, a few designer "hints," and other items of general curiosity.

The game has two parents. First there was this *Analog* magazine cover about ten years ago showing a mountain sailing through a lava sea – that started me thinking on the whole idea of crustals. *(The story was "Collision Course" – Ed.)* Second, my sister and I used to own a childrens' boardgame with a big plastic mountain in the middle. The idea was to go from START to FINISH along certain paths, and all paths intersected in the mountain. Unfortunately, the mountain was always being turned in place by random die rolls, so the "winning" player might suddenly find himself back at the beginning. This mountain has its descendant in the control rules of HOT SPOT, where Technocrat forces often find themselves sailing on top of a Ziegler-controlled crustal . . . and heading directly away from their objective.

I got started one Saturday morning when I woke up with this sudden idea for a microgame based on a molten planet. Without touching paper or pencil I kicked the idea around for several days, trying to cement the "feel" I was looking for in the game. At last, I sketched up a mapsheet and counter set and began to play a very dimly-conceived game.

The effect of the early playtesting was to establish some of the main parameters of the game – unit types, basic combat rules, crustal movement, etc. Many of these ideas survived – the mapsheet, for instance, is identical to my first draft. The balance of Technocrat and Ziegler forces was largely settled then, also, except for the addition of one Ziegler hovercraft later on the advice of Metagaming's playtesters.

Once I had some feel for how the game would be played, I left the table and met the typewriter. This didn't happen in a half-hour – I spent a few evenings pushing cardboard counters around until I felt ready to go on to the rules. My idea was to follow Howard Thompson's advice in his article, "WARP-WAR: A Designer's Introduction," to avoid rule writing until the game has begun to shape up. Otherwise, you can condemn yourself to an endless series of revisions to reflect playtesting changes.

As for rules writing, I was lucky in that I was thoroughly grounded in technical writing in my college days. I first jotted down a rules Table of Contents, writing down all the basic rules I thought I'd need – Crustal Movement, Normal Movement, Combat, Hovercraft Second Movement, Collisions, etc. At this time some new rules began to crop up. Hovercraft Second Movement, for example, was thrown into HOT SPOT at this point. So were the engineer squads and the crustal control rules, which allow the Technocrat player to seize control of a few crustals. The great thing about having already tested the game prior to writing rules was that I had a sense for what would and would not fit . . . although it was hardly infallible, as you'll see in a moment.

Next came more playtesting, this time exposed to the public and highly competitive. Due to a shortage of available recruits, I invented a simple system of possible strategies and used a programmable calculator to allow for a solitaire playtest game. I don't recommend this system – a solitaire game is nowhere near as valuable as a two-player game – but you *can* get a game tested this way if you have no alternatives.

Then I typed a final rules draft, incorporating a few changes from the playtesting. I also invented the name and wrote an Introduction and Front Cover (now *The Mission Briefing* section). Lastly, I drew up a comprehensive series of examples with illustrations. (I considered redrawing the mapsheet and counters, but refrained – I figured Metagaming would be more impressed with a worn-looking set.)

Then I mailed it in.

At Metagaming, Howard Thompson read it through and approved it for further examination. Keith Gross then took over the project. After he had seen the game playtested several times, he sent me back a comprehensive sheet of questions. Most of them were obvious points which had somehow gotten lost in the rules (i.e., "if rule section 11.2 says this, then how does this affect this other game phase . . . ") Other criticisms were more difficult to deal with.

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For instance, crustal movement wasn't always as simple as it is now – if you call the present neo-*Wooden Ships and Iron Men* system simple. My original plan called for simultaneous movement for both players in a special movement phase, and the rules provided for "frictionless" crustal movement. Well, there were problems. First of all, it called for a lot of cumbersome plotting on sheets of paper. It also had some technical snags, having to do with a two-axis movement system on a hexagonal grid. So Keith suggested I come up with a replacement.

There also used to be a whole set of rules devoted to a special unit called a "rocketfighter," used for aerial dogfights and strafing attacks against ground forces. What Keith noticed – and I had missed entirely – was that HOT SPOT played exactly the same way if you removed the whole rocketfighter business. Which just goes to show how astute Keith is.

So he sent my game back to me, asking for revisions. I playtested the game all over again (after all those weeks I'd forgotten how it worked!), tried some rule changes, and sent it in again.

And this time they kept it. The trouble with box manufacturing for *Stellar Conquest* and *Godsfire* held the schedule up for a long time, but at last came publication.

Now, I have to admit we made a few mistakes. Four, to be exact. One spelling error, one numbering error, and two minor rules errors. You'll find them all in the Errata Table below. One error, where an example contradicts the rules, sailed right through to the final copy without anyone – even myself – noticing, which greatly chagrins me. The other major error was a printing mistake. None of the mistakes should have led anyone astray, though they may have confused a few.

At this point I'd like to add my designer hints on playing HOT SPOT, but I must confess to not being a very good judge of my own game. I learned from Keith that I seem to play the game differently from anybody else, though I seem to do all right.

However, I do have an appeal. Does anyone have a few good variants?

As anyone who saw ONEWORLD knows, I love variants (being as there are 15 optional rules in that game). I would love to see what the readers of *The Space Gamer* can come up with. Here are my hints:

First of all, HOT SPOT does not represent the entire battle for Chiros, but rather the combat at one surface work station. There are several such stations on Chiros, and not all of them are identical.

It might take a larger map, but how about an attack on a mobile work station? Most surface stations are magnetically secured in place, but a few are left mobile to serve as surface transports. I imagine that there would be fewer of the small crustals. A mobile Central Crustal might lead to special "ramming" rules in the collision section, as well as a problem for the Ziegler commander . . . keeping the small crustals within power range of the moving Central Crustal!

For an extended game, how about a version where the Ziegler player receives reinforcements? Or a backwards game – Ziegler forces trying to regain control of a captured work station? The Technocrats would have reinforcements – since capture of the Central Crustal would have led to dropping of the energized barriers and contact with the invasion fleet. On the other hand, the Zieglers might bring up their own armored vehicles!

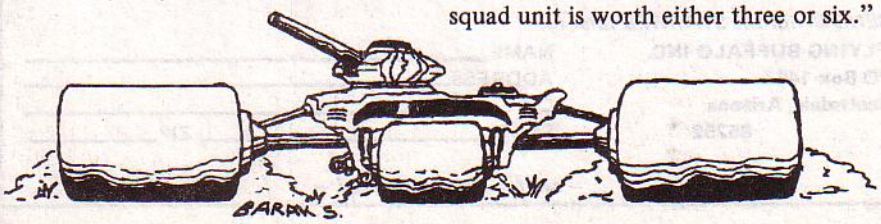
HOT SPOT is about a struggle between technocrats – scientists and technicians – and the Confederation establishment. It would not be too unusual to expect a few sympathizers among the Ziegler personnel – what might that do to the game? The mercenaries would probably stay loyal to Ziegler, but the technical staff – directing the movements of the crustals – might revolt . . .

For *Ogre* enthusiasts, consider this: the main control station for Chiros is on a very large crustal (or even a crustal network, something like Venice with its canals). The larger area makes room for maneuver and even an Ogre-style vehicle or two . . . if they fit the game universe we've postulated. Of course, such large vehicles would have to be confined to attack platforms and Central Crustals or damage would occur.

Lastly, for *War in the Pacific* lovers, there is always room for a campaign game played between wargaming clubs (say, eight simultaneous two-player games, with the option of loaning forces between the mapsheets before the Technocrat assault and/or after a victory has been obtained).

HOT SPOT ERRATA

Rulebook page and section	Error	Correction
p. 4, *The Mission Briefing*	"Hamburston" is also spelled "Hamberston"	"Hamburston" is correct.
p. 13, *7.6 Examples*	Last example, "or, if it was turning, it cannot complete the turn by swinging the rear hex into the clear hex."	Since this disagrees with the rules (see 7.3), it should read: "however, if it was turning, it CAN complete the turn by swinging the rear hex into the clear hex."
p. 13, *8.3 Enemy Units*	Refers to exception in rule 10.0, OVERRUNS.	Actually, OVERRUNS is rule 11.0.
p. 14, *10.0 Infantry Breakdowns*	"Each Ziegler infantry squad has attack and defense factors of two. Thus, a two-squad unit is worth either three or six."	Some words got left out! This should say, "Each Ziegler infantry squad has attack and defense factors of ONE. EACH TECHNOCRAT INFANTRY SQUAD HAS ATTACK AND DEFENSE FACTORS OF two. Thus, a two-squad unit is worth either TWO OR FOUR, AND A THREE-SQUAD UNIT IS WORTH EITHER three or six."



TIME TRAVEL
and how to game it

by Norman S. Howe

Time travel is a popular theme of science fiction that has been severely neglected by designers of fantasy games. One reason for this is that the process of changing previous turns in a wargame is tedious; the entire course of play must be repeated from the point of the change. This is easily done in a computerized game such as Flying Buffalo's *Time Trap*, but would be very boring for face-to-face gamers, particularly if new decisions were required rather than repetitions of turns with slight changes. In the case of single time-lines, there is the difficulty of paradox. A man is sent back in time to kill Wellington before Waterloo. He succeeds. Since Wellington died, no one knows that he once didn't, so no one is sent back . . . Actually, he would now be sent back to *ensure* that Wellington died.

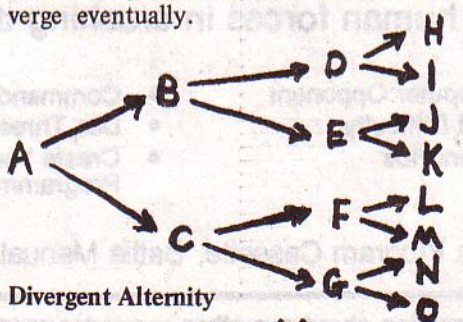
Given that it may be desirable to simulate history-changing time travel, how does a person go about designing a playable system? First, a game scale is needed: the whole world, and all of history. Why so long? For one thing, time travel is not an interesting small-scale battle tactic if both sides use it. They will leapfrog around the battlefield in time and space, using hindsight to improve their strategies. A game using tactical time travel would be like playing *Napoleon at Waterloo* over and over again. Gamers already do that; a game designed with a repetitive subsystem would merely be a poorer version of a game that could have used another subsystem to be more enjoyable.

Also, a limited area or duration of time travel would frustrate the player who wants to prevent the battle entirely by time-transmitting a nuclear weapon to enemy HQ or by wiping out the enemy homeland before he has a chance to crawl out of the trees. The better time-travel novels presume that small changes in the past can cause tremendous variation in the present, and that only the travellers ever suspect that things have changed. Ergo, the game system should simulate vast changes in the simplest possible fashion.

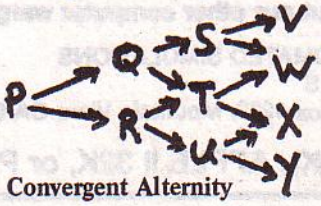
Secondly, methods of evaluating the effects of a particular historical change should be devised. What difference to modern history would the death of the infant Alexander have made? Perhaps little would be noticed; perhaps we would all belong to a Persian-speaking civilization. In the system to be presented, the gamer will have no suspicion of the general effect a particular change will make, the first time that the change occurs. In this respect the changes due to history are essentially random. A system involving rational effects could also be designed using the same network.

Thirdly, some terminology is needed to describe the network. The entire pattern of possible histories will be called an Alternity Net. Each point on the Net will be called a Node. A set of Nodes leading from the farthest Past to the farthest Future in the Net will be called a Time-Line. As only one Time-Line will be in existence at any point in the game, this will be called the Alpha Line; other possible histories will be Unrealized time-lines.

The form of the net will determine whether the histories are ultimately parallel or divergent. The two nets depicted below both have single starting points. This is merely a convenience, as it should be considered possible to go back to points earlier in time than "A", but each enlargement of the net will converge eventually.



Divergent Alternity



Convergent Alternity

Past ⟶ **Future**

The nodes represent critical events in history, each of which can have one of two outcomes. Thus, from A we can get to either B or C, and from Q to S or T. The difference between the two nets is that in the parallel form, T can be reached from both Q and R, but K can only be reached from E. Both nets will yield the same number of time-lines at any particular level; the parallel form will be used hereafter because it requires fewer nodes to create an adequate number of alternate time-lines.

To choose an alpha line to begin a game, start at the farthest past, P in the diagram, and roll a die. On an even roll, choose the left-hand node on the next level down; on an odd roll, choose the right-hand node. Note that the above net is bipolar; by having more connections or move possibilities per node, a more complex net is possible. Such complexity is needed when logical alternities are constructed; for a random alternity, it merely reduces playability.

The game system used with the above time-stream has not yet been described. This is because the alternities can be used with a vast variety of game systems. It is presumed that the time elapsing between nodes is measured in centuries; i.e., the game is society or civilization level. It is also presumed that "present" history at any node is the cumulative sum of past effects. Therefore, any game system could be designed and used with the time-travel modifications. The players would set up a "neutral" situation, and then generate an imbalanced "present" using the time-line rules above and decision effects tailored to the game system. It would not be necessary to create historical setups for previous periods unless desired by players (e.g., the game could be used as a frame for historical miniatures campaigns in several different eras, each represented by a level of nodes on the time-line).

The game would then be played, using time-travel ability as an adjunct. When a change in history is effected, players do not need to start the game over again; the cumulative changes are merely used to adjust the *current* state of affairs on the

map or in the campaign, in terms of economic power, military strength, etc. The historical pattern is abstract; the concrete form of the present will change in a rational fashion that does not require the re-playing of turns.

A specific example for four players: Deal out a deck of cards, face down, in a parallel alternity pattern. A regular deck plus jokers will create a pattern with 10 nodes in the last row, if no card is placed at P, which cannot be changed. Create an alpha time-line as described above. Turn the alpha cards face-up.

Now take four different colors of any type of game counter (poker chips or *Risk* tokens will do). Assign one suit and color to each player, and 20 counters of his color. Additional counters are given according to the value of the cards in the alpha time-line, with Jacks being worth 11, Queens 12, and Kings 13. For example, the 5 of Hearts would give the hearts player 5 extra counters. A Joker is a natural disaster and causes each player to lose 10 tokens.

The time-travel portion of the game is played in sequential turns. Players may move counters from their stockpiles to any one node in the alpha time-line, or from any node in that line to any other. They may attempt to change history at any node where they have tokens, as follows: the die is rolled, and each token at the node allows a +1 on the die roll. Time is considered conservative: a modified die roll of 5 or better is required to effect a change.

If a successful change is made, the cards on new alpha nodes are turned up, those on nodes which become unrealized are turned face-down, and counter strengths are adjusted to reflect the values of the new cards. If the new time-line is not complete, roll dice (using the 50% probability for each node) until a complete alternity is formed.

Example: Current history is P-Q-S-W from the parallel diagram. A player sends three tokens to P. He rolls a 2, for a total of 5 – a successful change. Q is changed to R. Of the nodes below R (T and U), neither is an alpha node, so the die must be rolled again. A 2 yields T. Of the nodes below T, one (W) is the current alpha node on that level. Time, being conservative, returns to its stream at that point. No further die rolls are required. The new history is P-R-T-W.

Combat between players occurs whenever two occupy the same node. Each player rolls as many dice as he has counters. The player with the highest total wins; the loser removes one counter from that node. Combat rounds continue until only one player has tokens at that node.

Tokens which are on a node when it becomes unrealized remain there, but may not move or attempt to alter history. A token may only affect die rolls for alnities in its immediate future, and cannot protect its own node from becoming unrealized due to changes in its own past.

A player wins when he is the only one to have surviving tokens in his stockpile and/or the alpha time-line.

This game system is appallingly simplistic; it depicts none of the historical interactions between the societies represented by the stockpiles. However, it shows how such a system might work.

With slight modification, for instance, this system could be used to play *Risk*. Suits of cards would need to be added from other decks if 5 or 6 players are involved, but the system need not be changed. The board game itself is played in the time-period represented by the last set of nodes. When a time-shift gives a player new counters, he can add them anywhere on the board or on alternity; counters lost to a time-shift may similarly be removed from any location.

This system is still in its infancy. I would like to see comments from others who have used time-travel, and from anyone who tries out this system.

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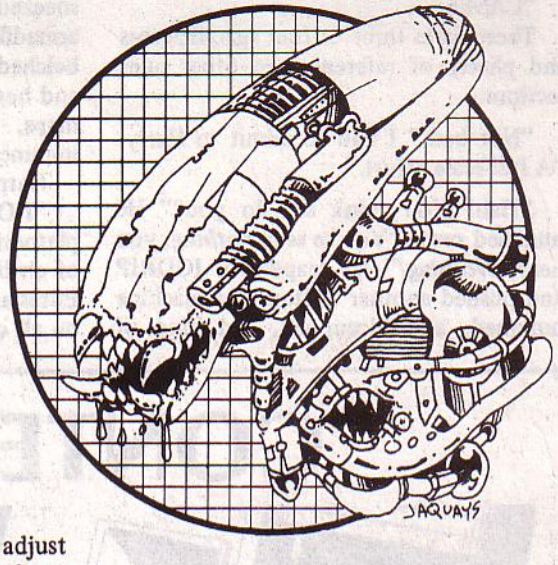
GAME DESIGN EXTRAORDINARY

by Allen Varney



My friend Harry, the computer genius and wargame freak, invited me over a few days back to show off his latest project.

When I got in the door I saw the room was packed full of machinery and Harry was packed full of excitement.

"You must see what I have done!" he shouted. "It'll revolutionize simulation gaming! It'll revolutionize the computer industry!" I calmed him down and weeded the exclamation points out of his speech.

Then he said, "It's called Instantaneous Game Design and Rules Intensification Program."

"IGDRIP," I suggested.

"Well, never mind about that. But wait until you see what this new program does!" he said, letting a few random exclamation points creep in once more.

"I got the idea from an obscure Lewis Carroll story. This machine" (pointing to a queer contraption) "will locate an idea for a game in anyone's mind – *anywhere* in someone's mind, and it takes that idea and feeds it to–"

"Wait a minute, Harry!" I interrupted. "You mean to say this invention of yours can read minds?"

"Forget about that, this is *important*!" The idea goes to, uh, IGDRIP here" (pointing to another, queerer contraption) "and my program converts it to a fully playtested simulation game, complete with components!" He bounced with glee. "It's ready for its first big test; that's why I invited you over today, to watch. But we need a subject."

I was getting ready to run when I saw Harry wasn't even looking at me; he was eyeing some nameless lab assistant performing nameless atrocities upon some nameless transistor at his bench. Harry grabbed him and dragged him over to the contraption that (Harry said) could read minds.

"Okay, he's all strapped in, and just lemme move the old Positron Absorber over to the left temple – so – and adjust the Atomic Gigamaree and" (and about a dozen more incomprehensible adjustments) "and we're ready to go!" He flipped a switch.

Nothing happened. But after a few seconds Harry rubbed his hands and flicked the switch back. He unstrapped the lab assistant, whose expression had never varied from unvarnished dullness, and turned to IGDRIP.

Pretty soon the thing began to hum, then louder, and then with a noise like an armadillo it belched out a printout. From another slot came a small map and counters. Harry showed me the printout.

"WAR FOR THE FRUIT is a game for two players," it read. "The game simulates an organized assault on a small fruit orchard by a ravenous horde of weevils, fruit-borers, strawberry beetles, and other nasty insects. The farmer player may use pesticides or natural predators such as anteaters to defend his precious plants, but he must be careful not to damage too many of his own products in his fight to the death with the bugs."

I leafed through the rest of the printout. There were sections on Movement, Stacking, Zones of Control, Combat (two dice not included), Pesticides, Anteater Supply, Fruit Damage, and a section of optional rules adding Exterminators and Seven-year Locusts in the Advanced Scenario.

I glanced at the rules section:

"7.0 STACKING.

Up to three friendly units may stack in a single hex."

"Pretty infantile," I told Harry.

"Ah, but you haven't seen *anything* yet!" he hissed, shaking an index finger in my face. "This is where the Rules Intensification part, the RI in IGDRIP, comes in! I feed that basic scheme into the computer again, and it will expand, augment, and complexify the whole works. Watch!"

He punched a button, and IGDRIP began to hum again. This time it began to hiccup too, and then after a few moments it made a noise like an armadillo in labor and belched out a larger, thicker printout, together with a big map, several sheets of counters, and miscellaneous other charts and schedules.

Harry displayed the new printout.

"THE CAMPAIGN FOR McDONALD'S GARDENS is a realistic rendering into game terms of an undeclared, covert battle between 2-4 angry orchard keepers. A game can be played in an evening. Each grower tries to protect his vast acreage from sabotage and invisible assault by trained fruit-flies, while simultaneously breeding his own warriors and breaching his opponents' defenses. Factors to take into account include proper care, feeding, and morale of the insects; weather; how good a fence (and fence-cutters) you're willing to buy; and ranges of pesticide clouds."

There was more, but I skipped it. There were bigger, longer sections on Movement Allowances, Conflict Resolution (two dice included with CRTs and directions), four different kinds of pesticides, their costs and ranges and effectiveness, Insect Morale (a brief section), Harvesting the Fruit, and Transportation of the Produce to Town (this was the Advanced Scenario; it required the Operational Map and presented its own opportunities for sabotage). Optional rules included Wirecutters and Keeping the Bugs from Deserting.

I glanced at a rules section:

"12.3 BUG UNIT STACKING.

"Up to four combat factors per side may stack in a given hex, if they are all bug units. For combinations of bug and human units see 13.0, BITES.

"CASES: . . ."

There were three or four specific cases and plenty of references to other rules sections.

"Not bad," I had to admit to Harry. "A full-scale effort."

"Hah! You think so, do you?" He hunched over. "You've seen *nothing*, you hear? *Nothing!*" He leaped for IGDRIP and pushed another button. The machine hummed, and hiccupped, and kind of sneezed, and then with a noise like an armadillo in labor riding a roller coaster it belched out a truly enormous printout and began churning out a stream of large maps, dozens of counter sheets, and innumerable charts and tables.

Harry lugged the printout over to me.

"HONEYDEW HOLOCAUST is a platoon-level simulation of the collapse of civilization and subsequent war on the Eurasian continent after a killing blight on all countries' fruit orchards. The great superpowers on the other continents – in this future world America, Brazil, and Australia – move in to pick up the pieces. The game is for 4 to 10 players; the mapboard is drawn to the scale of 1 hex = 200 feet . . . "

I looked; IGDRIP was still gleefully spewing out maps.

". . . and a scenario may take up to 180 hours to complete. The Beginners' Scenario, however, takes only half as long . . . "

I skipped forward; there were sections on Land, Sea, Air, Underground, and Space Travel; Food, Water, and Air Supply Lines; Morale, Enthusiasm, Well-Being, and Orgasm; Weapon Combat, Psychological Combat, Air Combat, Anti-Aircraft Combat, and six or seven other categories of combat, including Brawling; result charts for each of these duplicated in the printout and from IGDRIP's slots; stacking, terrain, morale, weather, and alliance tables; supply and casualty graphs of three or four types . . . I couldn't even figure out what a couple of charts were supposed to tell. And the *counters!*

I glanced at a rules section:

"17.493 AIR UNIT STACKING.

"Any number of friendly airborne units (FAUs) such as planes (see 4.62) may stack in the same hex with up to sixteen factors of land units (if more than two-thirds are friendly and none of the enemy units are Anti-Aircraft; see 14.3) and up to an equal number of enemy airborne units (EAUs) so long as no one category of FAUs is outnumbered by the EAUs of the same category, and the ratio of the number of FAUs in the least-numerous category to the number of EAUs in the most-numerous category is not less than 1:3 (see 12.0), except over mountainous terrain (see 8.3), in which case the ratio of the number of FAUs in the least-numerous . . . "

I gave up waiting for the rule to finish. With a happy armadillo groan IGDRIP ceased spilling out maps and graphs; there were already enough to wallpaper a room, and counters enough to carpet a floor with cardboard.

"Isn't it *terrific*?" cried Harry, only jumping around in his manful display of emotion. "This will revolutionize the gaming industry! What's the next step upward in complexity, the next plateau in the progression toward the *perfect* simulation? I have to know!"

He punched another button, and IGDRIP began humming and hiccupping and sneezing and grinding and churning and belching again. In his spellbound anticipation, Harry didn't see me running for the door.

CONTEST

BRUCE LEE MEETS IGDRIP?

Well, maybe not. But what IS going on here?

This month's contest: Explain this picture in game terms. You should (a) suggest either a scenario for an existing game (TFT, Traveller, etc.), OR a whole new game idea, in which the event pictured above could occur, and (b) write a short (500-1,000-word) piece of fiction based on your game idea, incorporating the pictured occurrence.

Entries will be judged on playability and originality of the game concept, and writing style of the fiction. The better your scenario explains the picture, the higher it will rate.

First prize will be a 12-issue subscription to TSG . . . and, if your game suggestion seems workable, we'll publish it. Second prize: 6 issues of TSG.

Contest deadline is April 25. All entries become the property of TSG. We reserve the right to award no first prize if no one comes up with an interesting and playable scenario. Send entries to CONTEST, The Space Gamer, P.O. Box 18805, Austin, TX 78760.

We're also interested in ideas for future contests. Send us your suggestions. If we use your idea, we'll add 6 issues to your subscription.

NUKE THE AIR-EATERS

a discussion of the psychology and effects of atomic war with advanced nuclear rules for *Invasion of the Air-Eaters*

by Glenn Williams

". . . there is no question that the aliens are hostile. National Guard units on the scene were nearly wiped out. Conventional attacks against their crawlers have been only marginally successful. Artillery supported by tactical air strikes were hardly more effective. The President has asked me to preside over this extraordinary session of the National Security Council to answer one simple question: Should we use strategic nuclear weapons? The floor is open . . . "

The nuclear weapon rules in the original INVASION OF THE AIR EATERS were highly abstract because of the restrictions of the microgame format. The nuclear rules of the expanded version in TSG 23 were still highly abstract. This article will look at modern nuclear weapons, their effects, and the doctrines which have evolved for their use. Having done so, a new set of nuclear weapon rules will be presented.

Nuclear bombs have a mystique almost as powerful as their blast in its paralyzing effect on thought. No President lightly considers their use. Military commanders are strictly forbidden to employ them without specific orders. An effort by the Air Force several years ago to convince the public that "nukes" were just a bigger bang failed. Speeches, books, and articles by senior USAF commanders did not convince anyone in power. Newspaper editors responded in horror; letters to the editors echoed. Today, the atomic mystique is intact.

An analysis of nuclear effects may take an immediate look at the explosion or a longer view, as detonation by-products begin to settle on the earth. The immediate effects are threefold: blast, heat, and radiation. All three are proportionate to the size of the weapon. Essentially, the weapons carried on most American and Soviet bombers and missiles affect no more than one to two hundred square kilometers.[1] In a game the scale of INVASION (about 600 km/hex, roughly 280,000 square km), the relatively small number of nuclear weapons exploded in a hex during a strike would affect a very small area – 2 to 3% – of that hex.

Long-term effects of nuclear weapons are less certain. We simply do not have enough experience to know what will happen. Some basic guidelines can be derived from the government study *The Effect of Nuclear Weapons.* In general, the effects of radiation drop off rapidly:

For every sevenfold increase in time after the explosion, the dose rate decreases by a factor of ten. For example, if the radiation dose rate at one hour after the explosion is taken as a reference point, then at seven hours after the explosion, the dose rate will have decreased to one tenth . . . This rule is accurate to within about 25% up to two weeks or so and is applicable to within a factor of two up to roughly six months after the nuclear detonations. Subsequently, the dose rate decreases at a much more rapid rate than predicted by this rule.[2]

The radiation from the blast, then, drops off fairly quickly. If the population had been forewarned and either evacuated or sheltered (even in basements), the radiation effects from selectively-targeted weapons would be minimal. Unfortunately, a nuclear explosion is a pretty big bang; dirt, water, and debris are sucked into the cloud and shot into the upper atmosphere. When those particles start trickling back to earth, they are called "fallout."

In INVASION, fallout is the main long-term effect of using nukes. Some of the irradiated bits of former earth, sea and sky have very long half-lives (the time it takes to lose half their radioactivity). However, there are general limits to the distribution of fallout in dangerous amounts:

Most of the radioactive debris tends to initially become a narrow band girdling the globe more or less at the latitude of injection, since the winds in the stratosphere are predominantly unidirectional, i.e., either easterly or westerly depending on the place and time. The band soon spreads out as a result of diffusion and in the winter and spring there is a poleward and downward transfer of debris . . . It is apparent that weapons residues entering the lower stratosphere in a particular hemisphere will tend to fall out in that hemisphere.[3]

There is even a slight bit of relief in the study, for Armageddon may not be so widespread:

Calculations, based on somewhat uncertain premises, suggest that, in the event nuclear weapons were to be used in warfare, debris from many thousands of megatons of fission would have to be added to the stratosphere before the delayed fallout from these weapons would lead to an average concentration in the human body equal to the recommended maximum value for occupationally exposed persons.[4]

The implications for the game are several:

1. Given the scale in space and time (3 months, 600 km), and the accuracy of nuclear weapons delivery systems, the population could probably be moved out of the way, or moderately protected, from all but the immediate effects of nuclear strikes.

2. Devastation would most likely be confined to the hex of detonation (due to blast and immediate radiation), with a much lower probability that devastation would occur elsewhere. If there were any other devastation, it would probably be in the same latitude as the detonation.

3. The long-term effects are more likely to be atmospheric. Really long-term effects, such as genetic mutations, would occur outside the duration of the game.

I am not arguing that there will be no other effects, and those discussed are actually much more complex – but given the scale of the game, these are a relatively good guide. Obviously, setting off a nuclear weapon is not a decision to be made lightly.

The horrendous effects of nuclear weapons are only half of the revolution in military affairs that has occurred since 1945. Almost all strategic nuclear weapons can be delivered anywhere that Man has walked, swum or flown – even the surface of the Moon! Long-range missiles launched from hardened silos or deep submarines can strike anywhere. Bombers can hunt individual targets, even moving ones. Strategic mobility under these circumstances is no longer a matter of trains, boats and planes picking up men and tanks to carry them halfway around the globe:

But as a decisive means of war, strategic maneuver today . . . can be defined as moving forces from one strategic direction or objective to another mainly by means of re-targeting nuclear rocket strikes.[5]

The new mobility is one of button-pushing, and a not very time-consuming process of conveying the orders to push those buttons. Strategic maneuver can now reach any area without regard for intervening enemy forces. In an all-out general war, lines would mean nothing. There are very few targets that would not yield to nuclear attack.

Now that we have our Doomsday weapons and the means to get them anywhere we wish, how do we use them? The general answer to that question is one of doctrine. The Soviets have a very precise definition of doctrine and its uses:

The purpose of doctrine is to answer the basic questions:

What enemy will be faced in a possible war?

What is the nature of the war in which the state and its armed forces will have to take part?

What goals and missions might they have to be faced with in such a war?

What armed forces are needed to perform the assigned missions, and in what direction must military developments be carried out?

How are preparations for war to be implemented?

What methods must be used to wage war?[6]

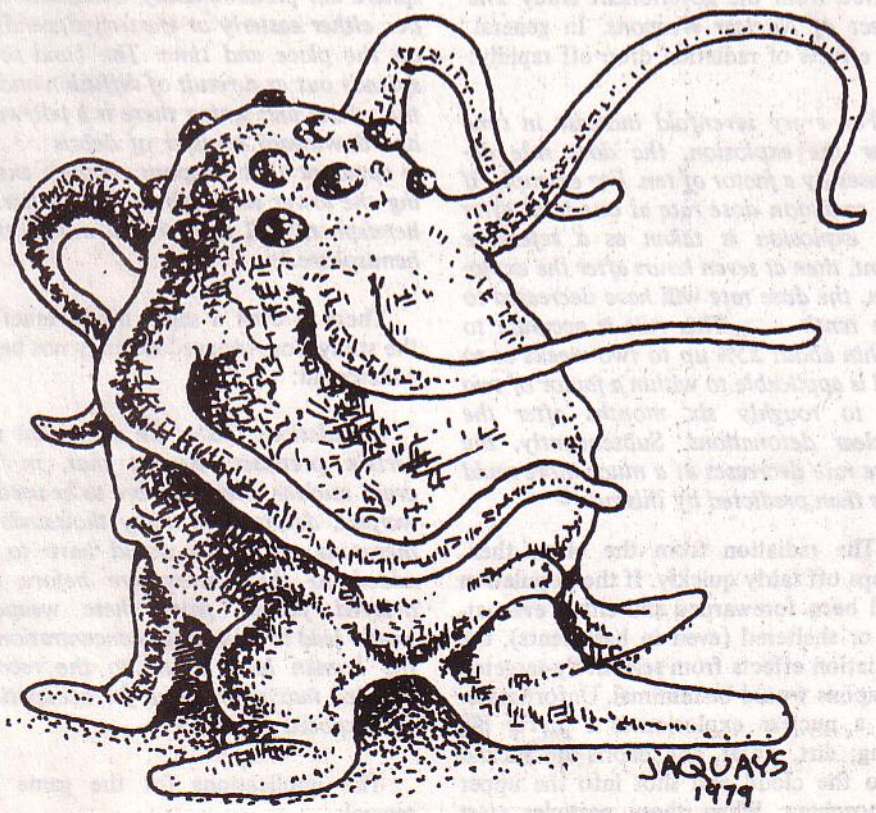
The Soviets have little doubt as to the place of nuclear weapons. Their doctrine clearly provides for the supremacy of their long-range missile troops from the outset, and the targets in this doctrine are not ambiguous:

The main and decisive means of waging the conflict will be the nuclear rocket weapon.[7]

In contrast to previous wars, when the main objectives of destruction were groupings of armed forces in the theaters of military operations, in a nuclear war such objectives can be simultaneously with military objectives, the chief sectors of the economy of the warring nations which have the job of supplying the war, the centers of transport communications, the state administrative bodies, the bodies of military leadership, and the basic centers of state communications.[8]

American doctrine tends to be more flexible than its Soviet counterpart. First, the Americans explicitly recognize the mystique of nuclear weapons and the reluctance to unleash them. Political and military crises are analyzed in terms of an escalation ladder. As the crisis mounts, the decision-maker climbs the ladder.[9] Each rung requires a decision: Will the statesman escalate the conflict, back down, or continue at the present level?

Escalation can occur in three ways: by intensifying the conflict (pouring in reinforcements, for example); widening the area of conflict (such as by attacking sanctuaries); and by compounding, which is essentially changing the nature of the war (for instance, attacking a nation's home territory when the war had been confined to a remote area of the globe). It is important to realize that the nuclear decision is separate from the escalation decision. It is possible to widen the area of conflict or increase its intensity without using nuclear weapons, as the populations of North Vietnam and Cambodia discovered. Even compound escalation can be without nukes, as it is still possible to wage war without them. However, at some point there are no ways to intensify the conflict or reach the long distances to



a central sanctuary without using thermonuclear tipped missiles or penetration bombers.

There are two types of nuclear threshold: a mechanical one, where the capability desired requires nuclear weapons and delivery systems; and a psychological one, usually reached first. The psychological threshold represents the first time a decision-maker comes face-to-fuse with a nuke. The situation may not require nuclear weapons, but they would be either militarily effective (such as against a massed target of tanks and troops) or psychologically effective as a warning.

You can escalate without going nuclear, but you can't go nuclear without escalating. At the very least, nuclear weapons intensify the conflict. Let's go nuclear. Where do we use them? American strategy defines two basic approaches: countervalue and counterforce.[9] Countervalue is a euphemism for blowing the enemy's cities to kingdom come, along with whatever agricultural areas you can get in the bargain. Counterforce means the target is the enemy's military, his troops, shipyards, airfields and missile bases. A third concept in American strategy is that it should be "damage-limiting." American strategic nuclear doctrine calls for the controlled use of weapons, primarily against the enemy's warmaking capacity. It is an attempt to control the situation and convince the enemy to back off before the last stage of nuclear war is reached.

The final conflict is often called "spasmodic nuclear war." It is uncontrolled, massive strikes against every fiber of the enemy society. There is certain annihilation of both sides, with no hope of victory. It is revenge, the revenge of the dying gasp.

While Soviet doctrine integrates strategic nuclear weapons into their total strategy (even tying their use to post-strike exploitation by ground forces), American doctrine is more subtle and psychological. Both sides view war as an extension of politics by other means. The American doctrine goes a step farther and views war as a conflict waged beyond the battlefield in the minds of the opposing commanders. Thus, the damage-limiting countervalue strategy specifically avoids strikes against the enemy's national political command structure and communication system. If you want your enemy to back off, you have to leave him the means to do so.

Nuclear thresholds, doctrines, strategic mobility, counterforce and countervalue . . . all these are the concepts of men and women in air-conditioned offices and command posts far removed from threats. There is a very real chance that once the shooting begins and mushroom clouds begin to sprout, someone, somewhere, will lose control and go for broke. Both the Americans and the Soviets recognize that doctrine is fine until . . .

During war, military doctrine withdraws somewhat into the background because in armed conflict, they (the leaders) are guided primarily by military-political and military-strategic considerations and by the conclusions and generalizations which follow from the conditions of a specific situation. Consequently, war and armed conflict are guided not by doctrine, but by strategy.[10]

. . . doctrines control the minds of men only in periods of nonemergency. . . In the moment of truth, when the possibility of major devastation occurs, one is likely to discover sudden changes in doctrine.[11]

INVASION OF THE AIR EATERS is definitely not your average "period of nonemergency." I doubt whether any analyst, East of West, has seriously considered the possibility of an invasion from space. Therefore, let us do so – from a nuclear point of view.

The very first problem is one of shock. Culture shock is a severe blow to the collective ego of a people. We would

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suddenly face a vastly superior technology – beaming transportation, crawlers, and holographic manufacturing of the aliens themselves – in INVASION. The shock would be deep-seated, striking the very roots of our collective ego. Weapons do not have to be hardware. Fear and awe are also powerful. In fact, they are the very things which make nuclear weapons so effective.

In the game, the effects of shock must be ignored – an "other things being equal" type of assumption. If we do not assume shock has been overcome, there is no game. The aliens walk over us and convert the atmosphere, and Mankind becomes yet another evolutionary dead end that could not adapt to changes. We must assume that, somehow, a few men and women in positions of power have remained to make decisions . . . and somewhere there exist the military means and attitudes necessary to carry out those decisions.

Once the shock passes, the analysis begins. In the calm, subterranean chambers of the National Security Council, where this article began, a few people began bandying about the terms we have discussed. What would they conclude?

I will offer an analysis of the situation according to Marshal Grechko's definition of doctrine. The enemy is a hostile alien force of unknown type and composition. The nature of the war is one of extinction; if the air is converted, we lose. Therefore, the goals and missions of the armed forces are:

1. Prevent the conversion of the air.
2. Interfere with the enemy's means of production (his earthbound bases and the Mothership).
3. Defeat his military forces on earth and in space before they are able to destroy our own means of production.
4. Carry the war into space and destroy the alien Mothership. This last condition is imposed by the nature of the game. It is what analysts call a "zero-sum" game. There are no shades of victory: one side wins totally, the other loses totally.

The armed forces necessary are those which will allow the enemy to be destroyed. On earth, research and development are called for, to produce entirely new weaponry. The disintegrator batteries and tanks, improved submarines, etc., are really the only weapons which have a good chance of destroying the alien attackers on earth. In space, attack forces and Corvettes must be available in significant numbers. There is, however, a class of weapons which offers a very good chance of destroying the aliens: nukes.

Thus, the Earth player is very quickly faced with the nuclear question. It entails some risk (as the game stands, every nuclear strike devastates an IU). Is it worth the risk? What would the NSC or the Presidium decide? Would our first interplanetary war be our first nuclear war? If an atmospheric converter were operating in Antarctica, would we nuke it? What if it were in Kansas City?

"Thank you, ladies and gentlemen. I am sure the President will be greatly comforted to know that your decision is the same one he felt necessary. I will convey it to the United Nations Security Council. Let us pray for victory."

Expanded Nuclear Weapons Rules

INVASION OF THE AIR EATERS is a microgame, subject to strict lengths on length and complexity. The following rules violate those limits. They are intended for players who would like a feel for the grand strategy of nuclear war. The Alien response rules are intended to restore play balance.

1.0 Nuclear Units and Capability

1.1 New counters. These rules require four new counter types. These new counters represent ICBM and bomber bases, the space-shuttle fleet, and nuclear devastation.

ICBM Fields

Bomber Bases

Space Shuttle

Nuclear Devastation

1.2 Additional Nuclear-Capable Units. Two of the four initial Terran nuclear submarine fleets should be marked as missile-sub fleets (one American, one Soviet). No other units in the game have a strategic nuclear capability.

1.3 Characteristics of Strategic Nuclear Systems.

1.3.1 Movement. Sub movement is unchanged. ICBM and Bomber Bases may not move once deployed. The space shuttle may move to and from the In Orbit box. It must always land on the hex in which it was deployed.

1.3.2 Strikes. The number on each nuclear weapons counter is the number of nuclear strikes that unit may make in each Terran player combat phase without becoming exhausted. The total number of warheads available is so vast that production of weapons is not a factor. (The two sub fleets should be marked with their nuclear capability, which is 2.)

1.4 Number and Deployment of Nuclear Units

1.4.1 Submarines. One SF must be in the Atlantic, one in the Pacific.

1.4.2 ICBM bases. The Soviet player gets one ICBM field, the American player one. The Soviet base goes in hex 1410, 1511, 1510, or 1409 (his choice); the American base goes in hex 1017, 1117, or 1016 (his choice).

1.4.3 Bombers. The Soviet gets one bomber base in any hex of the Soviet Union. The American player gets one base in any American hex except Alaska.

1.4.4 Space Shuttles. The Soviet player gets one, with a launch hex at 1511; the American also gets one, with a launch hex of 1018. A shuttle returning from orbit may only be placed in the launch hex of its own nation.

2.0 Nuclear Threshold and Doctrine

2.1 Threshold Die Roll. The Terran player(s) may not use nuclear weapons until the "nuclear threshold" has been reached. At the beginning of each Terran combat phase, the Terran rolls a die to see if the threshold has been reached. The modifications listed below are applied. An adjusted die roll of 1 or less is the nuclear threshold. Beginning on the turn the threshold is reached, the Terran(s) may use nukes.

Nuclear Threshold Die Roll Adjustments

Alien attack inside the US or the Soviet Union: -1 for each such attack that turn.

Each IU inside the US or Soviet Union devastated: -1 (cumulative).

Each other IU devastated: -1 for each devastated that turn.

Each 2 levels of atmosphere reduction: (fractions don't count): -1 (cumulative).

NOTE: The cumulative adjustments apply every turn, even if the damage has been repaired. The adjustments that apply only that turn are ignored on subsequent turns.

2.2 Doctrine: the hierarchy of attacks. When the Terran player reaches the nuclear threshold, he must carry out his nuclear attacks in a strict hierarchy. Beginning with the highest-level Alien unit present, all Alien units at that level must be destroyed (by any means) before the Terran player may make a nuclear attack on a lower-priority unit. The hierarchy

applies only to earthbound units; space shuttle attacks against aliens in orbit may be made in any turn after the threshold has been breached. If a higher-priority Alien unit later appears, the Terran must again destroy it before he attacks any lesser units with nuclear weapons.

Hierarchy of Nuclear Targets

1. Atmosphere Converters in all- or part-sea hexes
2. Bases in all- or part-sea hexes
3. Atmosphere Converters in all-land hexes
4. Bases on all-land hexes
5. Crawlers on all- or part-sea hexes
6. Crawlers on all-land hexes

2.3 Spasmodic Attacks. A Terran player who does not wish to use nukes at all may decline to make the "threshold" die roll in any or every turn. However, when the adjusted die roll would be less than one that turn, no matter what (i.e., a reduction for that turn of -6 or less), the Terran player MUST conduct a "spasmodic" nuclear attack. In addition, any time the Terran player rolls for nuclear threshold and the roll, when adjusted, is -4 or below, he MUST conduct a spasmodic nuclear attack (see 3.2).

3.0 Nuclear Combat

3.1 Basic Nuclear Combat Method. Each nuclear unit may make as many nuclear strikes per phase as its capability number allows. Each attack is resolved separately, using the nuclear combat tables. Under certain circumstances, the Terran may exceed his nuclear capability by salvoing or conducting a spasmodic attack (below). Each nuclear strike is one attack against one Alien unit.

3.1.1 Phasing. Nuclear strikes are always made at the beginning of the Terran combat phase. They must be made before any conventional attacks.

3.1.2 Location. Nuclear strikes may never be made into the national territory of the U.S. or Soviet Union, nor into the territory of any region having an army at that time, UNLESS that strike, if successful, would win the game for the Terrans.

3.1.3 Except as restricted in 3.1.2, any nuclear unit may attack into any hex regardless of range. The target hex may contain Terran units, IUs, and/or OUs.

3.1.4 Orbital attacks. A nuclear-capable shuttle may make its strike against an Alien in the "In Orbit" box. If it does so, it must end that turn in the "In Orbit" box. Under certain circumstances (see 6.0) the ICBM fields may attack into orbit. No other Terran nuclear unit can strike into orbit. Attacks on orbiting units cause no fallout or other "side effects" to the Terran.

3.1.5 Defense of new units. ICBMs, bomber bases, and grounded shuttles defend, for all purposes, as though they were LT units. A shuttle in the In Orbit box defends as though it were an SAF.

3.2 Salvo and Spasmodic Nuclear Attacks. On any turn, the Terran may elect to salvo with any or all of his nuclear weapons counters. The number of strikes for each salvoing unit is tripled. At the conclusion of the turn, the unit is removed, regardless of the outcome of its nuclear attacks. The salvo is made without regard for equipment maintenance or force regeneration, thus "burning up" the units. See the production section for replacement of such units.

3.2.1 Whenever the Terran is mandated to conduct a spasmodic attack, all nuclear units must salvo, even if all Alien units have already been destroyed. Once all eligible Alien units are gone, apportion all remaining strikes against the hexes which had been occupied by Alien units at the beginning of that combat phase. Resolve all nuclear attacks to see if what ill effects, if any, the Terran player suffered from the attacks (see below).

3.2.2 Atmosphere Reduction. Reduce the atmospheric index by 1 for each individual unit which salvoes.

3.3 Nuclear Attack Effects

3.3.1 Short-Term Effects. After resolving a nuclear strike against an Alien unit, the Terran must see whether the attack affected Terran units or production capacity in the target hex. For each IU/OU or unit in the hex, the player rolls a die and consults the Nuclear Effect Table. No Alien units, other than the one attacked, are ever affected.

3.3.2 Long-term effects (Fallout). For game purposes, only dispersion of the fallout in the latitude of the detonation is considered, and only fallout within the three-month period of that game-turn has any effect. At the end of his nuclear attacks for a turn, the Terran player consults the Fallout Table, rolls a die for wind direction and range, and makes a "fallout" nuclear effect roll for each Terran unit or IU/OU within range of the fallout. The die roll is increased by 1 for each 2 hexes distance from the detonation hex. IU/OUs which are devastated by fallout may be rebuilt at a cost of only 5 IUs.

3.3.3 Nuclear Devastation. Whenever an IU/OU is devastated by a strike in its own hex, it is permanently devastated and may never be rebuilt. Place a nuclear devastation marker on the hex. Nuclear devastation never results from a long-term effect roll.

NUCLEAR COMBAT TABLES

Nuclear Strikes and Fallout Effects

TARGET	STRIKE	FALLOUT
AC, Base, IU, or OU	1-3	1-3
CW	1-2	NA
Army	1-4	1-2
SF, ISF, LT, DT, LB, DB	1-3	1-2
Any grounded space unit	1-5	1-3
ESC	1-2	NA
MS	1	NA

A die roll in the range given in the STRIKE column destroys/devastates that unit if it is the target of an attack (for alien units) or is in a hex attacked by nuclear weapons (for Terrans).

A die roll in the range given in the FALLOUT column destroys/devastates a Terran unit. Make this roll only for units in a fallout area, as determined by the table below.

Long-Term Effect Table

ROLL	WIND DIRECTION/RANGE
1	Due east 2 hexes
2	Due east 4 hexes
3	Due east 6 hexes
4	Due west 2 hexes
5	Due west 4 hexes
6	Due west 6 hexes

Roll the die once for wind direction and range; then consult the fallout column of the short-term effect table for every Terran unit in the fallout path. Increase the fallout die roll by 1 for each full 2 hexes from the detonation.

4.0 Nuclear Production. Nuclear units may be produced only if (a) the Terran player has salvoed or made a spasmodic attack, and wishes to replace the lost units, or (b) the Terran wishes to give the Space Shuttles nuclear capability. Costs are shown below. The Terran may never have more nuclear-capable units than he started with.

Nuclear Production

UNIT	IU COST
ICBM Field	15
Bomber	15
Nuclear capable SF	15
Shuttle	20
Shuttle nuclear capability	3*

*NOTE: The 3-IU cost must be paid for EACH shuttle given nuclear capability. New shuttles are not automatically nuclear-capable.

5.0 Alien Attack Restriction.

The Alien may have units in the same hexes as Terran nuclear units, but may may not attack nuclear units until the Terran player makes a nuclear attack. SFs are not included in this restriction, as they also have conventional attack ability.

6.0 ABM/ASM Capability.

The Terran player may activate his unused anti-ballistic-missile / anti-satellite-missile defenses. Each ICBM base may be given the capability to make one nuclear strike into space each turn, if the Terran expends 10 IU for each. This capability is in addition to the normal nuclear strikes made by ICBM bases. This system may not salvo and may not be attacked separately from the ICBM base.

After the first time the ABM/ASM system is used, the Mothership is presumed to move into an orbit beyond its reach. Any time the ABM/ASM system attacks and gets a die roll of 6, it malfunctions permanently and may not be used again or replaced.

7.0 Alien Response.

7.1 Alien Escalation. Once the Terran player uses nuclear weapons, the Alien may counter-escalate by introducing new weapons. He may select one of the three given below. Once he has a new weapon, his units may still make one attack per turn, but they may make this attack either normally or with the new weapon. The new weapons are presumed to be an activation of systems already on board the Alien vehicles. All current and future Alien units then have the new weapon with no change in production.

Alien Advanced Weaponry

1. Field Disruptor Beams. A massive version of the standard disruptor, carried by ESCs only. An ESC using this weapon may (a) devastate one IU/OU and destroy one Terran unit in the same hex each turn, or (b) destroy all Terran units in a given hex, leaving IU/OUs untouched. Armies may be attacked by this weapon.

2. Anti-Matter Bottles (AMBs). Each LN has the capability to deliver an AMB to one earth hex. The LN is automatically destroyed. One die is rolled for the effect; On a 1-4, all Terran IU/OUs in the hex are devastated and a nuclear devastation marker is placed. On a roll of 5 or 6 the IU/OUs are unaffected. Roll also for each Terran unit in the hex; a roll of 1-4 destroys that unit.

3. Bioelectric Field Scrambling. All Alien units have this ability. All Alien attack die rolls (except for devastation) are henceforth reduced by 1. All Terran attack die rolls (except nuclear attacks) are henceforth increased by 1. A CW using this weapon may attack an Army; the Army is destroyed on an (adjusted) roll of 1 or 2.

7.2 Alien Truce Offer. The aliens may, at any time, offer to convert Venus instead of the earth. If the Terran accepts, reduce the atmosphere index by 1 for each AC deployed, then remove all alien units from the earth and compute the victory conditions. If the Terran refuses, the Alien rolls one die. On a 1 or 2, he gets all three new weapons; otherwise, he gets only one. Play continues.

7.3 Alien Revenge. If the Mothership is destroyed by a nuclear attack, the Alien immediately receives all three weapon systems. Truce is no longer possible; the game continues.

8.0 Global War.

If the players are using the expansion given in TSG 24 and playing a global war, there are no doctrinal limits on the use of nuclear weapons; disregard section 2.2 of these rules. The restrictions in section 3.1.2 are also changed:

8.1 Nuclear Attack Restrictions. No player may ever launch a nuclear strike against any hex of his own nation, an ally, or a neutral. Any other hex on the map may be attacked.

8.2 Allied Revulsion. When a player uses nuclear weapons for the first time, he must roll once for each nation allied with him. On a roll of 1 or 2, that nation becomes a neutral. Any of the player's units in that region must leave on the next turn; failure to do so violates neutrality.

8.3 Proliferation. Once nuclear weapons have been used, roll one die for each neutral (including allies turned neutral). On a 1 or 2, that neutral goes nuclear, receiving an inherent one-strike-per-turn capability. It will attack the nearest enemy unit outside its territory or IU in the enemy homeland. The neutral has no salvo capability and will forswear nuclear weapons if any of its IUs are subjected to nuclear devastation. Its nuclear capability will not be made available to a player should it become aligned with him.

8.4 Neutrals. The territory of a neutral may not be violated except by invasion or a single nuclear strike. A player may not launch multiple strikes against a neutral. If a player attacks a neutral, it aligns itself with his opponent.

These rules were intended to make players cautions, but more realistically cautious than in the original game or the Designer's Introduction. None of us really know what would happen if a nuclear war occurred, but the use of nuclear weapons in these rules is at a much lower level than all-out war. Very accurate delivery systems and selective targeting are assumed. Nuclear war, even with Man backed up to the wall and gasping for air, is not to be undertaken lightly. The problem is to use just a little Armageddon without taking the whole thing.

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Weapons for Hobbits

in "The Fantasy Trip"

by Paul Wagner

One aspect of MELEE not covered in any great depth is a set of weapons suitable for Hobbits. Normal ST requirements prevent most Halflings from using weapons other than daggers and slings. By nature they are a peace-loving people, but in times of duress they can handle arms as competently as any other race.

Practically no effort was made by the Halfling population toward specific manufacture of military arms (besides staves for Shirriffs, which do not really count), but certain instruments of common use readily made the transition. There are two historic periods where Hobbits in great numbers took up arms with which to defend themselves: the Battle of Greenfields (the year 1147 by Shire reckoning, or 2747 of the Third Age) and the Battle of Bywater (S.R. 1419; 3019 of the Third Age).

In the former of these, little is known beyond the fact that Bandobras Took and a following of Hobbits defeated an "invasion of orcs" in the Northfarthing – this "invasion" has been called by others a minor raid. Whatever the circumstances, "Bullroarer" Took charged the ranks of the "goblins of Mount Gram" (actually Orcs) in the Battle of the Green Fields, and knocked their King Golfimbul's head clean off with a wooden club. (*The Hobbit*, Ballantine Books, p. 30.) Nothing is said of the arms of his compatriots, and as Bandobras Took was huge for a Hobbit and probably very strong, it can be assumed he wielded a standard ST 9 1-die club (probably rolling double or triple damage to behead his foe). Beyond these things, little is said or known of this battle and the arms used.

However, in more recent and better recorded history a second (and last) battle occurred within the borders of the Shire. This, the Battle of Bywater, was fought between men (possibly including some man-orcs) and Hobbits. The fierceness of the struggle is evident in the casualties sustained by each side; the men lost approximately 70 dead, while the halflings lost 19 dead and 30 wounded. In this conflict a great variety of Hobbit weapons were used, including bows, axes and knives (along with the small swords of Meriadoc and Peregrine).

The following references to Hobbit weaponry may be found in *The Return of the King*, Ballantine Books, N.Y., copyright 1965:

Cudgel or club	pp. 332, 333
Staves	pp. 346, 355
Axes	pp. 345, 355, 364
Hammers	p. 355
Knives	p. 355
Hayforks	p. 355
Hunting or Hobbit bows:	pp. 355, 357, 358, 359, 364, 370.

Proposed rules for these Hobbit weapons are given in the table below.

These rules should help put a bit more fight into your standard halfling. Of course, these or similar weapons are also fit for opponents such as Goblins, and should be accessible to all creatures. As to how they will perform in actual combat, expect no miracles – these changes are small, not dramatic, and parallel the MELEE rules.

Editor's note:

The TFT: ADVANCED MELEE rules make club and knife damage directly dependent on the user's ST – thus, small characters can use these weapons. Still, the halfling weapons described here will add variety to your arsenal and will not unbalance the game. Gamers may consider them an "official" addition to THE FANTASY TRIP. I have added the costs and weights to Paul's original article.

If you are using IN THE LABYRINTH, the staff should be considered a small version of the quarterstaff, requiring the Quarterstaff talent, if it is to be used to disarm a foe. Also, a hayfork (like a trident or javelin) is too short to make a two-hex "jab," though it does strike before any non-pole weapon and will do double damage on a charge.

WEAPON	*DAMAGE*	*COST*	*WEIGHT*	*ST*	*COMMENTS*
Club, cudgel, or hammer*	1	$10	1.5	9	Standard rules. Damage varies in ITL.
Knife*	1-1	$10	.1	–	
Axe†	1	$25	1.5	8	Two-handed for halfling-sized creatures.
Staff†	1-1	$15	1	7	Like a quarterstaff. The favored weapon of the Shirriffs – more for law enforcement than war.
Hayfork	1-2	$15	1.2	8	A pole weapon. Cannot be thrown. A one-handed weapon.
Hunting Bow†	1-2	$20	1.5	8	2 shots/turn if adjDX = 15+.
Hobbit Bow†	1-3	$20	1.2	7	2 shots/turn if adjDX = 15+.

As with all missile weapons, halflings get a +3 DX with these two miniature bows, and do an extra +1 damage when they hit with them. The hunting bow, with its faster fire, may seem to make the sling obsolete. But remember: the sling is a one-handed weapon, allowing for use of a shield – and it has no minimum ST.

* Can be thrown † Two-handed weapon

GAME DESIGN:

Theory and Practice

First of a Series

by Nick Schuessler and Steve Jackson

This article is the first of a series on game designing from both a practical and theoretical standpoint. It will discuss the whys and wherefores of design: what a game designer is trying to accomplish, how to maximize both accuracy and playability, how to test a finished game – and how to market it.

The series will have two authors, to reflect the two main viewpoints in game design – the theoretical and the practical.

Nick Schuessler is a veteran wargamer. His main interest is WWII, especially "monster" games. He is a student of simulation theory, and has taught a class in wargame design. The main body of this section is his.

Steve Jackson is the editor/publisher of TSG, and the designer of several published wargames, including Ogre *and the* Fantasy Trip *system. His main interest in gaming leans toward science fiction and fantasy. His comments appear in the italic paragraphs, and will be (in this section, at least) "practical" responses or amplifications of Nick's theoretical comments.*

* * *

Theorizing about a subject is usually much less interesting than participation. Furthermore, in real-life war and peace, the philosopher can be a positive menace. Certainly, in the Twentieth Century, military theoreticians have been discredited almost with the first shot. The French nearly lost World War I because of their Plan XVII, based on the "theory" of *elan.* The U.S. debacle in Vietnam can be explained by a succession of wrong-headed theories – containment, measured escalation, Vietnamization, etc. – each intended to correct the stupidities of the last.

For more mundane matters, like wargaming, we can usually say that playing the game is far better than theorizing about it; in fact, one might argue that playing the game is the ultimate critical analysis, with the board and the pieces making the "statement."

So the first question is: Why bother with wargame theory at all? Well, first, we are dealing with design. Trying to design anything without a clear idea of the final product is frustrating and, ultimately, futile.

(Well, not always. It IS possible to come up with a good game on "instinct." Take my word for it. But your odds are better if you have some rules to go by, and a good gamer always plays the odds.)

Second, the number of "bad" games now on the market demonstrates that wargaming theory is not all that self-evident. Most of those bad games were produced by designers who didn't really understand wargaming (never mind their experience) in general, or, worse, didn't understand the specific games they were designing. In the end, theoretical analysis is the process of pushing forward in some areas and setting limits in others. Where potential is unrealized, you have a mediocre wargame. Where the rules are ignored, you have a bad one.

What is Wargaming?

The starting point in theoretical analysis is definition of terms. For wargaming theory, this is complicated and tedious. Since the word "wargaming" itself is somewhat disputed, we must first decide what term we are defining. Some prefer "conflict simulation" or "operations analysis." These terms have merit, though they assume we can develop a common understanding of the "conflict" in "conflict simulation" or the "operations" in "operations analysis." For now we will defer to the elder. "Wargaming" has its roots in the eighteenth-century *kriegspiel*; it is still the most widely used and most readily recognized term. It is also the most commercial of the three; "simulations" and "analysis" conjure up visions of Pentagon computers and think tanks.

The best approach to a workable definition is to identify attributes. If it has certain things, it's a wargame. These attributes will also be of practical value to the designer, since they must be the basis of all wargames. Our only problem comes with the scope of our definition – that is, how many attributes we select, and how inclusive they are.

For the time being, let us define wargaming as *the representation of force over space and time.* If we can identify the components – force, space, and time – then we have a wargame. Otherwise, it's back to Milton Bradley. Now we must define the concepts of space, force, and time. Later we will combine these ideas to achieve other game terms (e.g., space + time = movement).

FORCE implies conflict, since the application of force will normally be resisted. We will further restrict our definition of force to physical violence or the threat of physical violence. Business, legal, or sociological conflicts will not qualify as "force" except in the most peripheral fashion. Street riots are fine, but a game about "who gets control of the city council to direct the new federal grant" cannot be a wargame. We might note here that, while at least two sides are needed for "conflict," it is not necessary that both sides be represented by players. A solitaire wargame, with one side manipulated by a player while the other moves according to a predetermined pattern, is no less a wargame.

(True. Almost a truism: if you don't have armed conflict, it's not a wargame. But note that a set of rules about city council politics could turn a simplistic street-riot game into a challenging political simulation – which would be a better wargame. The inclusion of some "forceless" conflict can improve a game.)

TIME and SPACE work together to fix the environmental limits. The details of time and space are unimportant. Time may be measured in centuries or milliseconds; space may be represented in light-years or meters. Only two restric-

tions apply. First, there must be limits of some sort. Time and space must be defined, at least roughly. The greater the accuracy of definition, the closer the simulation. Second, space and time must be correlated. One-year game turns on a map where each hex represents 50 meters would be a practical joke, not a wargame.

(Only on a human scale. You couldn't simulate WWII on a one-year-50-meters format. That doesn't mean you couldn't design a playable game, with a good s-f rationale, that way. . . if only to prove it could be done. In a later article, I want to discuss the challenge as a fertile source of game ideas. A gamer says "Think you could design a game that did this weird thing?" Or, better yet, "Nobody can design a game that does this weird thing!" There's your game idea right there. Take it out and develop it.)

Space is also the single factor that separates wargames from other simulations. In wars and wargaming alike, space is vitally important. How much space you hold – and where – results in life-or-death advantages and disadvantages. This concept of space is what ties wargaming to boardgaming, and why war (large-scale conflict) works so well in a boardgame format.

For example, we could develop a cops-and-robbers game to meet our criteria of force and scale – but the concept of space would be lacking. The robbers don't "hold" the grocery store. They gain no advantage by "seizing" the bank. The bank is a means, not an end. By the same token, the cops don't really "recapture" or "counter-attack" the bank (it even looks funny in print). They have no interest in the bank as "space"; they merely want to capture the robbers and, incidentally, protect life and property.

I dwell on this point because there are a number of pseudo-conflict games where the concept of space is artficially imposed to give the image of a wargame without its substance. The most famous case is *Monopoly*. Certainly there is conflict, but it was only achieved by making some spaces more valuable than others in what is essentially a cash-flow exercise. The meaning of space in *Monopoly* is without substance.

The existence of a playing board almost demands that the designer make space important: my side, your side, getting from here to there . . . Thus, because the board is there, we have the most inane situations being forced into unnatural formats. Courtroom games, business games, housing-development games – these aren't wargames, and really shouldn't be boardgames at all. Flash: Perry Mason cleared the last pocket of resistance from the Prosecutor's table today in Superior Court; Hamilton Burger has ordered an immediate counterattack!

This point is lost on most game designers. In some cases, the use of the board is limited to bookkeeping (e.g., *Clue*), and the designer should be applauded. In most cases, we have horrid examples of a game wanting and trying to be a wargame . . . without the war.

Let us return to our definition ("the representation of space over time") and test to see if it fits with reality. Chess and checkers would obviously be categorized as wargames, and properly so. Bridge would not; the concept of space is lacking. *Monopoly* and its genre are certainly not. Backgammon is probably a wargame, but *Parcheesi* probably isn't.

(Chess, checkers, and backgammon, of course, have specific time and space constraints – but no scale. Time is "one move," strictly alternating. Space is "one space," a square or point. Is this a weakness in the definition, or just an extreme case?)

In the commercial world, we can safely say that all of the conventional historical games of Avalon Hill (AH), Simulations Publications, Inc. (SPI), and Game Designer's Workshop (GDW) are wargames. Some AH titles that would not be wargames would include *Rail Baron* and the like. In SPI's lineup, a highly questionable entry would be *After the Holocaust.*

Nothing in our definition excludes science fiction, fantasy, or what we might call "hypothetical-future" (*The Next War, The East is Red*, etc.) games. One is tempted to lump certain sub-genre games into a special category and avoid them completely, since they create some peculiar problems. Role-playing games, for example, strain the environmental limitations of space and time.

(I would say that a role-playing game may or may not also be a wargame, and that any commercially successful wargame will be found to contain role-playing elements. Design of role-playing games will be covered in a later article.)

Certainly the "conventional" s-f entries are bona fide wargames: *Stellar Conquest, Starship Troopers*, et cetera. The literature of science fiction has a history of military conflict in a futuristic setting.

Usually these theoretical problems sort themselves out with time. The exact place of fantasy and science fiction has yet to be determined, simply because these games are new and unfamiliar to

Dragonslayer

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the more conventional wargaming experience. *(And outselling them, right at the moment.)* As the titles multiply and the games become more sophisticated, we may need to expand our definition to include these entries. Dating hobby wargaming from about 1962, with the issue of *Tactics II*, it's remarkable how far the field has progressed in such a short time.

The beauty of the field is that the final decision will be made by the gamers – not the critics. The wargamer will define wargames . . . by voting with his dollars. A very satisfactory solution.

Derivative Concepts

Our concepts of space, force, and time give us the threshold of wargaming design by establishing minimum requirements. In short, there is no wargame without space, force, and time. Combinations of these factors yield the basic mechanics of wargaming: movement and combat. Beyond these minimums, we can develop the concepts of logistics, leadership, morale, politics, production . . .

MOVEMENT derives from space and time. Space (the "environmental context") forces us to deal with scale. The scale of the board (how much "real" space is represented by the grid) is the beginning of design. This selection of scale will put limits on the time scale and on the size of the units. The time scale, combined with the map scale, will give us the basic formula for determining movement. Logically, then, we can say that space + time = movement.

By the same token, force + space = COMBAT. A unit projects its force through space. Hence, the weight-value of the unit is needed; the space factor will expand or limit the projection of that force. We trifle just a bit here by excluding time from this calculation. In nearly all combat, time is more important in movement to the fight than to the fight itself. Furthermore, if the scale is "playable," then time should take care of itself. I realize there is an uneasy compromise here. What about "long" battles? What about ammunition supplies? For our immediate purposes, though, we shall assume that force and space are the important components of combat.

Movement and combat, alone, will give us a passable wargame. Checkers is a good example – but even in checkers, the designer wanted more, wanted to go beyond the simple limits of movement and combat. Hence, we have the "kinging" when the piece reaches the eighth rank. This is a form of production (as is the promotion of the pawn in chess). We move naturally from movement and combat to the factors behind them.

In historical wargaming, the weight-value of a counter implies many things: weapon quality, general educational level of the populace, training of the unit, ability to supply the unit, etc. The combat resolution presupposes levels of leadership, morale of the troops, and the larger questions of popular support, alliances, etc. The point here is this: Movement and combat can stand alone in a game design, but they imply many other factors. The designer may choose to leave these factors implicit, or to explicitly represent one or more.

(And, as a general rule, the more factors are explicit (that is, separately represented), the more charts and tables you will have, the more "accurate" your game will be, and the less playable it will become. If most factors are implicit, your design will be cleaner, play will be faster . . . and you will have more of a "game" and less of a "simulation.")

While the final judgment rests with the designer, the level of a wargame will often force inclusion of certain explicit factors.

Levels of Wargames

The "level" of a wargame is a general measure of its scale in terms of size of hex and size of unit. In military parlance, we can identify four levels:

Tactical – small-unit actions, squad or platoon (10-100 men/counter)

Operational – company/battalion/brigade action (100-1,000 men/counter)

Strategic – division/corps/army action (1,000-100,000 men/counter)

Grand strategic – theater-level action (over 100,000 men/counter)

With the appearance of *Squad Leader/Cross of Iron*, we might add one additional category: sub-tactical or psychological, where one counter represents a single man and individual prowess and morale become important. *(The combat-resolution modules of most role-playing games would also fall into this category.)*

Now, the selection of a "level" of game carries certain imperatives. Obviously it tends to define the physical scale. Beyond that, it will often dictate the use of certain concepts beyond simple movement and combat. For example, SPI's *Global War* would have been absurd without a production component.

It would be convenient if we could give hard-and-fast rules – "if it's a strategic level game, you must include production," etc. Alas, game design is more of an art than a science, and firm rules are rare indeed. First, we must recall that all these functions – politics, morale, leadership, and production – are already present implicitly in the movement and combat design. The "art" comes in deciding which, and how much, of these other functions should be made explicit. Second, the function of the game (the "statement" to be made by the designer) will dictate what is needed to give the proper "feel." Using or not using a given item does not make a good or bad wargame; each game must be evaluated on its own merits.

For example, AH's *PanzerBlitz/Panzer Leader* tactical system includes no provisions for leadership or morale. A later AH entry, *Squad Leader*, has quite elaborate leadership and morale rules. Both are excellent games; in both, the systems work and the "statement" of the designer is clear.

In the present "state of the art," the areas of logistics, production, morale, and leadership have been fairly well developed as wargame components. The area of politics is more shadowy. Historical games tend to impose historical political constraints, mostly because dealing with the vagaries of politics in any other way is difficult. One or two systems have attempted to quantify politics ("political points"), with less-than-satisfactory results. With our definition of wargaming, this is not too surprising – politics tend to hibernate when the fighting starts. There is some question whether politics (except in the most abstract form) even has a place in wargaming. The appearance of a solid game design with a heavy (and workable) political component would help. Until then, the question is open.

Movement and combat; morale and leadership; production and logistics; politics (still with a question mark) – these are the outlines of wargame design. The diversity of possible wargame topics and still-unresolved design questions takes us far beyond these beginnings. Moving from the ground to the air . . . to the water . . . to outer space . . . backward and forward into time . . . creates special problems for the designer. New areas such as role playing, and old areas like the "limited intelligence" problem, call for new and more workable game systems. The computer looms just over the horizon and promises (or threatens) to turn the industry on its collective head. The old giants of gaming, AH and SPI, are being challenged by the newcomers.

In the end, it will be the independent designer who sorts out the mess – as it has always been. Appropriately, chess makes the point: All the fancy talk in the world can't justify a bad move or ruin a good one. The board tells its own story.

Adding MUSKETS to MELEE

by Jim Dickey

Tired of hacking away with battleaxes or shooting with crossbows that do a "measly" 3 dice damage? Or do you want to set up a historical scenario? The musket is for you.

The details of the musket are listed below. I should point out that I did not attempt to re-create a specific weapon. I have not differentiated between various types of gunlocks, firing mechanisms, barrel lengths, bullet sizes, etc. The weapon below is an approximation based on the muskets prevalent in the late 15th and early 16th centuries.

DAMAGE: 4 + 1
ST NEEDED: 10
NOTES: Fires every 6th turn. Unloaded, can be used as a club (1 die damage). Fires like a missile weapon. Used with the bayonet (optional), it becomes a one-die pole weapon. The musket is always a two-handed weapon, however it is used.

The advantage of the musket is that a player of moderate strength can do a tremendous amount of damage. The disadvantage is that it has a tremendously low rate of fire. The way muskets were used, and the way to employ them in *Melee* or *TFT*, is to have your gunners screened by pole weapon users.

All normal *Melee* rules apply to the musket, with the following exceptions and notes:

(1) A musket is considered a weapon for purposes of using the "defend" option. Defending with a musket ruins it as a gun, though not as a club or pole weapon.

(2) A "defend" option does not protect from musket fire; a "dodge" does.

(3) You do not have to change weapons after firing a musket if you wish to use it as a club or pole weapon on the turn after firing.

(4) If a roll of 18 (or hostile magic) breaks a musket, it cannot fire after that turn, but can still be used as a club or pole weapon unless it breaks again.. If a musket breaks while being used as a club or pole weapon, it becomes totally useless.

(5) Musketeers may wear armor, taking any DX penalties called for. Armor and shields also offer normal protection against musket fire.

I'm sure that last statement will upset many people. I'll just point out that the use of armor actually increased during the early days of musketry, in a semi-successful attempt at protection. Note that even an armored figure, given an average roll for damage by a musket, will take enough hits to fall down.

The bayonet is optional. A musket with bayonet is a 2-handed 1-die pole weapon; it cannot be thrown or make a 2-hex jab. Successful and widespread use of the bayonet did not occur until the early 18th century.

Muskets can be put to good use in wild-animal hunts. Two bears, or three wolves, against two spearmen and one musketeer, makes for a fairly balanced scenario.

Engagements between Spanish Conquistadores and Mexican or Peruvian Indians are also possible. For a decent-sized engagement, use a Wizard or larger hexsheet if you have one. Following are suggestions for outfitting the various groups:

Spanish: Cutlasses, shortswords, halberds, crossbows, muskets; leather armor and small shields (for enlisted men); plate (for officers and cavalry).

Mexicans: Clubs, maces, javelins, slings and small bows; small shields and (for a few) leather armor.

Peruvians: Daggers, maces, small axes, spears; small shields and (for most warriors) leather armor.

Editor's note:

Another worthwhile 'official' addition to MELEE . . . or IN THE LABYRINTH/ ADVANCED MELEE! The ADVANCED MELEE ruless allow for medieval gunpowder weapons – the arquebus (an early long-barreled weapon) and blunderbuss (a medieval shotgun). The musket described here is a more advanced weapon, better suited to a historical campaign than to a fantasy game.

If your campaign is set on Cidri, use the standard 1 in 6 chance that a given shot will fail to fire due to bad gunpowder. Wherever your campaign takes place, there should be some chance of bad, wet, cheap, or fake gunpowder.

In ITL, the GUNS talent will be necessary to use a musket without a -4 DX. Note also that one shot every 6 turns is a VERY optimistic rate of fire. I think 1 in 12 would be more realistic.

A "broken weapon" roll of 18 when a musket is fired should endanger the gunner. The powder explodes, doing 1 die of damage to the musketeer.

Remember that a gun used against primitives (Indians on Earth; Neanderthals on Cidri) is likely to produce great fright. More sophisticated foes who have never seen a gun will probably assume it is a new kind of magic. If they try to defend themselves with Spell Shield, they are in trouble. If they use Reverse Missiles, your gunners may never get a second shot . . .

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DEUS EX MACHINA

by Bruce F. Webster

* * *

COMPUTERIZING HEX-MAPS

I have watched with interest as the fields of computing (especially personal computing) and gaming have found and embraced each other. Good simulation games often require a lot of bookkeeping and other attention to detail, which is something computers can handle well. Most simulation games also require maps – which computers don't necessarily excel in. This is especially true if the maps use a hexagonal grid for movement. The gamer/programmer must then either modify the game drastically or spend long hours discovering how those maps can be simulated on a computer.

I have put in those long hours, with more than a little success. In order to save you all the time I spent gazing at hex sheets, muttering, and scribbling, this article will discuss computer implementation of hex maps.

The present article will define the notation and terminology that I'll use in this column, and describe hex-map algorithms. Future articles will deal with ways to define the hex map within your program, display it on the CRT screen, and finding the best path between two map hexes. Hopefully, by then, some of you will be writing articles with more and better information on the subject.

The following notation will be used with regards to hexes:

H1, H2, . . . or HEX1, HEX2, . . . – This refers to the actual hex coordinate (e.g., 1616, 2120).

XXYY – This shows how the hex coordinate is broken up into its component parts.

XX1, XX2, . . . and YY1, YY2, . . . – These show how the component parts themselves are represented. They are considered to be positive integers running from 01 to 99. XX1 and YY1 are the components of HEX1.

dX, dY – These are the differences values between the components of two hexes. For example, dX usually equals XX2 - XX1 and dY usually equals YY2 - YY1.

aX, aY – The absolute values of the differences; aX is the absolute value of dX. These are used so often that they deserve their own terms.

sX, sY – The signs of the differences, defined as follows: sX = 1 if dX is greater than 0; sX = 0 if dX = 0; sX = -1 if dX is less than 0.

D or DIST – This is usually used to represent the distance between two hexes.

F or FACE – This is used for a facing value, to represent the relative position of two hexes. F must fall into the range 0-7, as follows:

F = 0 – Hexes are identical.

F = 1 to 6 – Hexes are adjacent. More on this later.

F = 7 – Hexes not adjacent.

INT (expression) – This means use *only the integer portion* of the evaluated expression. For instance, INT (1.5 + 2.2) = INT (3.7) = 3.

MAX (a, b, . . . x) – This means to select the highest of all the values given. MAX (3, -1, 6, 5, .5, 2, -7) = 6.

MOD (x, m) – This means calculate x "modulo" m, which is simply the remainder left over when you divide x by m. On most places where I use this, m = 2, so the value becomes 0 if x is even and 1 if x is odd.

The algorithms themselves will be given in a structured language format simply because that will be the clearest and (in my opinion) most effective way. You should be able to implement them almost directly into ALGOL, PASCAL, or PL/1, and they should translate easily into BASIC or FORTRAN, or onto a programmable calculator (most were developed on my HP-67).

There are various ways of numbering the hexes on a hex map, but two styles predominate. The first, shown in Figure 1a, will be called the SPI method; it is used in almost all of that firm's games. The first two digits are used to number the hex columns, starting with column 1 (01yy) at the far left. The second two digits count the hexes within each column, starting with xx01 at the top. The odd-numbered columns (i.e., 15yy, 17yy, etc.) are shifted up in the example shown; on some maps, you will find them shifted down. It is very easy to translate SPI numbering into array subscripts for computer implementation; however, hex-to-hex calculations tend to be messy.

The second major style (see Figure 1b) will be called the MG (or Metagaming) method because of its use in most of the MG Microgames. A rectangular hex map of this type starts with hex 01yy in the upper left-hand corner and hex nn01 in the upper right, and is then filled in according to the diagram in Figure 1b. The hex-to-array-subscripts translation is difficult, but hex-to-hex calculations are neat and simple.

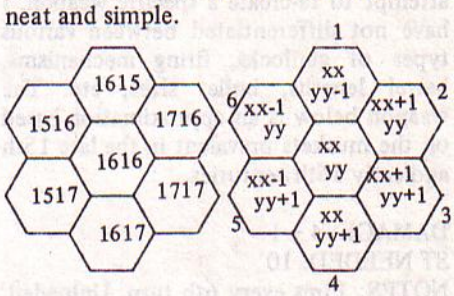

Figure 1a: SPI numbering system

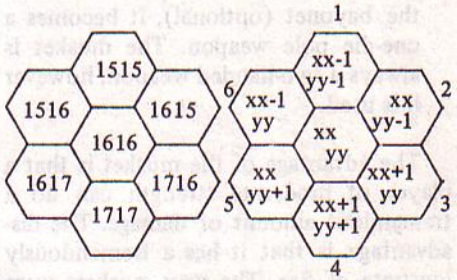

Figure 1b: MG numbering system

If you are going to represent a hex map on a computer, you will need some sort of data structure to do it with. In most cases, this would probably be an array. (If you don't know what an array is, this section won't mean much to you; go out and learn.) A two-dimensional array – let's call it MAP(n,m) will work the nicest, but a one-dimensional array will also work. The trick here is taking the XX and YY components of a hex number and converting them into array subscripts (or vice versa) – a process known, ironically, as *mapping*. The goal here is to represent each hex by a unique location in the array, and at the same time to have no unused array locations.

The goal is easily achieved with the SPI style. To convert a hex number HEX1 into array subscripts (n,m), you simply split up the hex number into XX1 and YY1 and let n=XX1 and m=YY1. By the same token, the hex number of a particular array location MAP(n,m) is given by

HEX = 100*n + m.

For a hex map with N columns and M hexes per column, you simply declare the array to be of size (N,M).

The MG style doesn't map quite so easily. It is possible to use the same procedure, but you will either waste a lot of memory (the map for OGRE would use only 41% of the array) or you will end up with a diamond-shaped map. Try the following procedure instead:

First, decide how many columns of hexes you want and how many hexes will be in each column (if this second number varies, use the largest value). We'll call these values N and M, respectively. Then decide if the upper left hex will be shifted high or low (LH or LL, respectively) and whether the upper right hex will be high or low (RH and RL) – this will depend on whether N is odd or even. You are now going to calculate four values –D1, D2, D3, and D4 – based on the above information:

D1 = INT(N/2) +1

left hex	*right hex*	*D2*	*D3*	*D4*
LH	RH	0	1	0
LH	RL	0	-1	0
LL	RH	1	0	1
LL	RL	1	0	0

You can now define MAP to be (N,M) with no wasted space. To map HEX1 into (n,m), use the following formulae:

n = D1 + (XX1-YY1) - D4
m = INT[(XX1+YY1+2-D1)/2]

Likewise, you can translate (n,m) into HEX1 with the following:

XX1 = m + INT[(n-D2)/2]
YY1 = m + D1 - (1 + INT[(n-D3)/2])

Distance Calculation

Most of you who have done hex algorithms have probably tried to calculate the distance in hexes between two given hexes; I first did it three years ago for the SPI style on my HP-67. This is where the MG style starts looking good. This is also where you'll have to start referring back to the terms I defined at the beginning.

For the SPI style, the following algorithm works. It is not necessarily the best; feel free to improve on it. The variable DIST will be the distance when you stop.

```
DIST = aX
if aY = 0 then stop
T = 1 - MOD (XX1, 2) * 2
DT = - (T * sY)
if DT is less than 0 then DT = 0
DEL = aY - INT [(DIST+DT)/2]
if DEL is less than 0 then DEL = 0
DIST = DIST + DEL
stop
```

By comparison, here is the same algorithm (that is, an algorithm for distance) for the MG style:

```
if sX = sY then DIST = MAX(aX,aY)
           else DIST = aX + aY
```

It is sometimes easier to implement it as follows:

```
if aX = 0 or aY = 0 or dX/dY is
   greater than 0 then DIST =
   max(aX,aY)
else DIST = aX + aY
```

That is one of the reasons why I tend to favor the MG style over the SPI style.

Adjacency

The goal here is: Given two hexes, determine if they are adjacent (having one side in common) and, if so, what their relative positions are. As with distance, the SPI algorithm is involved while the MG algorithm is a simple table-lookup. Refer to Figure 1 for facing values.

For the SPI style maps, use this:

```
SWITCH = aX + aY + 1
M = MOD (XX1,2)
if SWITCH = 1 then FACE = 0
if SWITCH is greater than 3 then
   FACE = 7
if SWITCH = 3 then do
   if aX = aY then do
    T = 1-2*M
    DT = IABS (T-dY) (abs. value)
    if DT = 0 then SWITCH = 2
              else FACE = 7
   end if
end if
if SWITCH = 2 then do
   if sX = 1 and M = 0 then FACE
    = 5 + aY
   if sX = 1 and M = 1 then FACE
    = 6 - aY
   if sX = 0 then FACE = INT(2.5
    + 1.5 * dY)
   if sX = -1 and M = 0 then FACE
    = 3 - aY
   if sX = -1 and M = 1 then FACE
    = 2 + aY
   end if
   stop
```

For the MG style, you can define an array FVAL(6,2) as follows:

```
FVAL(1-6,1) = -1,0,1,1,0,-1
FVAL(1-6,2) = -1,-1,0,1,1,0
```

and use it as follows:

```
FACE = -1
if dX=0 and dY=0 then FACE = 0
if sX*sY = -1 or aX is greater than 1
   or aY is greater than 1 then
   FACE = 7
if FACE = -1 then do
   for I = 1 to 6 by 1 do
    if dX = FVAL(I,1) and dY =
     FVAL(I,2) then FACE = 1
    end for
end if
stop
```

Position

This is the reverse of the above process. Here you are given a hex number and a facing value (0-6); you must produce a corresponding hex number. The SPI algorithm is as follows:

```
(given HEX1 and FACE)
(M = max. no. of hexes per column)
   FHEX = HEX1
   if FACE = 0 or FACE greater than
      6 then stop
   if FACE = 1 or FACE = 4 then do
      if FACE = 1 then INCY = -1
              else INCY = 1
      fY = YY1 + INCY
      if fY = 0 or fY is greater than
        M then FHEX = 0 (off
        the map!)
          else FHEX = HEX1 +
          INCY
      stop
   end if
   T = 1 - 2*MOD(XX1,2)
   N = 1 - 2*[IABS(4-FACE)-1]
   INCY = INT[(T+N)/2]
   if FACE = 5 then INCX = -1
           else INCX = 1
   fX = XX1 + INCX
   fY = YY1 + INCY
   if fY = 0 or fY is greater than M
      or fX = 0 or fX is greater than
      M then FHEX = 0
        else FHEX = 100*fX + fY
   stop
```

The MG algorithm uses FVAL(6,2) again (with the same initial values):

```
   if FACE = 0 or FACE is greater
      than 6 then FHEX = HEX1
      else do
      fX = XX1 + FVAL(FACE,1)
      fY = YY1 + FVAL(FACE,2)
      if fX = 0 or fY = 0 then FHEX =
        HEX1
        else FHEX = 100*fX + fY
   end else
   stop
```

You may notice that on this algorithm I didn't check for an upper out-of-bounds condition. This is because the check isn't as straightforward as for the SPI style (remember the array mapping formulae?) I leave it to you as an exercise.

That's all for now. Next time: The geometry of hexes.

Featured Review

SNAPSHOT

by Tony Watson

The analogy between vast and stormy seas and the immensities of interstellar space is one that has held throughout SF gaming and fiction. Both posit a breed of brave, if sometimes ruthless, men. Piracy, hijackings, boarding parties and the slicing of laser beams down narrow corridors are natural parts of SF adventure gaming.

SNAPSHOT is a new game by GDW which deals with just these intriguing actions. The game is a derivative of the popular *Traveller* SF role-playing system, though it is intended to be a game unto itself. Its rule book is basically a compilation and extrapolation of the personal combat system and weapons outlined in Book I of *Traveller* and the *Mercenary* supplement. Like a previous GDW release, *Mayday*, which dealt with starship-to-starship combat, SNAPSHOT takes a section of the main *Traveller* rules and structures a new game around it. The result is an interesting stand-alone game, or a helpful addition to the *Traveller* system.

As usual with material from GDW, physical quality and presentation are very nice. The game comes boxed, with a three-color illustration by Paul Jaquays on the cover.

The rulebook is nicely laid out in nine major sections and a number of smaller subsections, facilitating reference. Much of the material has been covered in the Personal Combat and Weapons sections of *Traveller*, and is repeated here for those who do not have the parent game.

These rules are supplemented by a double-sided pull-out sheet for the combat tables. These tables are precalculated for range and armor factors; one needs only to figure in personal bonuses for the character in question. This saves considerable time and effort over the original system, which required referees or players to make such calculations for every attack or prepare a chart of their own.

Counter design is rather simple, yet still functional and colorful. Each counter represents an individual, denoted by the silhouette of a man or woman in an action pose, armed with one of a variety of weapons. The counters carry a letter for ID purposes. There are four color-groups of counters, as well as a number of extra counters depicting explosions, incapacitated or dead characters, or hexes covered by individuals with fire weapons. There are also imaginative "creature" pieces, ranging from a tree kraken to something like a praying mantis.

Probably the most impressive component is the map. It represents deck plans of a Type S Scout/Courier and a Type A Free Trader. These are carefully done, striking a nice balance between function and style. The map is gridded out in half-inch squares, used to regulate combat and movement. Symbols are used to denote a variety of doors, hatchways, iris valves, tunnels, stairways, and other features. Staterooms, driverooms, common areas, and the bridge are all labeled. These plans are somewhat different from those offered by Judges' Guild, but the same half-inch grid is used.

SNAPSHOT draws heavily on *Traveller's* personal combat system, but there are some important, and interesting, changes. Where the original system was somewhat abstract, SNAPSHOT's combat rules allow more structured play. Personal combat seems to play a smaller part in *Traveller* than in most role-playing games (at least, it has in my campaign and those I have participated in), so the abstractions offered in the Book 1 rules did not seem so important. SNAPSHOT represents a refinement and improvement of these combat rules and allows skirmishes and firefights to be nicely simulated. While the game includes only two ship plans, I see no reason why the game system could not cover cover combat in and around buildings and other structures; this is a project I have undertaken for my own campaign by acquiring some half-inch graph paper and applying a ruler, felt-tip pens, and some imagination. With some additions, SNAPSHOT could serve as an all-purpose personal combat module for *Traveller*.

The most important change in the game is the concept of Action Points (APs). As players familiar with *Traveller* will recall, three traits are important in combat . . . strength, dexterity, and endurance, each determined by the roll of two dice. A player's APs are equal to the sum of the first two of these characteristics. This is an excellent new concept.

APs determine the sequence of character movement, with lower-AP characters moving first and higher-AP characters having the ability to pre-empt them and move first if they so desire.

APs are spent to perform actions during a turn. A variety of movement and combat actions are possible, each costing a certain number of points to execute. Movement actions include regular movement, running, sneaking (tripling normal movement costs but affording some defensive bonus), changing or picking up items, and opening or closing portals and doors. Combat activities include reloading, arming and throwing grenades, engaging in hand-to-hand combat, and firing ranged weapons. In the last, players can make an aimed shot or "snapshot." The latter costs only half the APs of the first, but is less effective. Players may also forfeit all their APs for a turn to set up a covering shot on a particular hex, and as long as an enemy is in that hex, he can be fired at. Needless to say, this is pretty handy for setting up an ambush or sealing off a corridor.

The actual procedure for resolving combat is fairly simple, and essentially identical to that outlined in *Traveller*. First the attacker must spend APs commensurate with the type of attack being made, and determine if he has a clear line of sight to the target. The combat table is then consulted. The attacker's weapon is indexed against the defender's armor and the range, to yield a number that must be met or exceeded on two dice to achieve a hit. This die roll may be

modified negatively by sneaking or running on the part of the defender, or positively by skill level in the weapon fired by the attacker. These skills are determined via the character-generation process of Book 1 when the game is integrated with *Traveller*, or using two tables provided for the purpose in SNAPSHOT.

If a hit is made, then a number of dice, as determined by weapon type, are rolled to determine wounds. These wound points are applied to the character's three combat-related traits (strength, dexterity, and endurance). These hits may be spread out as the player wishes, save on the first time he is hit, when they must all be applied to one, determined randomly. When an individual reaches zero in any one characteristic, he is rendered temporarily unconscious; reduction of two characteristics to zero means serious injury requiring medical care. Loss of all three means death. Because of the lethality of weapons (most do from two to four dice damage, some considerably more), firefights tend to be short and to the point.

The game also includes a host of rules for special situations. These allow for group hits by automatic weapons and high explosives, breaching walls, gas and tranquilizer rounds, and even a few paragraphs devoted to the subtleties of Zero-G combat.

The game concludes with a set of scenarios. One particularly imaginative one has the four-man crew of a scout craft facing a half-dozen escaped animal specimens intended for the Emporer's zoological gardens. Other scenarios include attempts at highjacking or mutiny, and boarding parties. Optional ideas are included with each scenario so that games may be varied each time they are played. It would be easy for imaginative gamers to come up with interesting situations on their own.

Of course, when used in conjunction with *Traveller* campaigns, combats will arise in the context of the role-playing game. While SNAPSHOT is a solid game in its own right, I think it truly realizes its potential when used with *Traveller*. Players must consider character survival more carefully and think of goals and ambitions beyond the immediate combat.

SNAPSHOT, published by Game Designers' Workshop; companion game to TRAVELLER. Designed by Marc Miller (designer of TRAVELLER and many other GDW games). Boxed, with 28-page 6" x 10" rulebook, 112 counters, 2 dice, 18" x 22" mapsheet, and combat charts. For 2-6 players (or more); 1-4 hour playing time; published 1979.

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Featured Review:

WARRIORS OF THE GREEN PLANET TRILOGY

by W. G. Armintrout

To my mind, there are three angles from which you can judge a game:

I. PLAYABILITY. If it doesn't play well, then it doesn't matter what it is about, who designed it, or how many innovative systems it has.

II. SIMULATION. A game has to make us believe in its systems. In traditional wargames, this most often means "Is it *real*?" In our world of science fiction and fantasy, we often add more of a fictional factor: "does it invoke its own special universe? As an example of success in that last category I can point to *White Bear & Red Moon.*

III. HYPE. A bit of consumerism. Does the game live up to its advertisements, or are we all being subtly (or grossly) misled?

Now I'll proceed with this review.

These games look like the tactical brothers to Chaosium's *Lords of the Middle Sea*, for once again we are in a post-holocaust world where lighter-than-air ships and faltering technological remnants combine with old-fashioned swords and shields on the field of combat. There are three stand-alone games in the trilogy: MIND WAR, the mental combat game; WAR OF THE SKY GALLEONS, the aerial combat game; and WARRIORS OF THE GREEN PLANET, for ground combat.

I refer you now to the advertisement for this game series:

"A strange future world! With equally strange methods of warfare! Elements of the ancient, the future, and the unusual are mixed in this new trilogy of games. These three games recreate the various and different gypes of conflict between the people of a nearly destroyed and slowly rebuilding future society. Something new in the world of wargaming, each game is complete and can be played and enjoyed separately, or combined into one detailed and fantastic battle that joins all three into a multi-dimensional situation for the master tactician."

These three games are being sold with the idea that the average gamer can combine them to form three different combination games. So, in this review, I intend to take a look at all six of the possibilities within the Green Planet trilogy.

The individual games:

MIND WAR was given a beautiful review in TSG No. 21, by Michael Striley. The game pits para-psychic magicians in a bloodless mental combat within a hyper-spatial grid. The idea is beautiful. But, to repeat and agree with Mr. Striley, "Unfortunately, scoring a hit is not as dependent upon strategy and tactics as it is on luck-of-the-die and simply outguessing one's opponent, as players leapfrog back and forth, firing more or less randomly. The result of all this is a game that is often frustrating, and that awards wins and losses by criteria basically unrelated to relative gaming skill . . . MIND WAR is simple to learn, fast-moving, and can generally be played in less than an hour . . . But, in my opinion . . . the game's weaknesses outweigh its strengths."

The game comes with a 17" x 11" three-color mapsheet, 16-page rulebook, and die-cut mounted counters in a zip-lock bag; $3.50 postpaid.

WAR OF THE SKY GALLEONS was reviewed by Steve List way back in TSG No. 11. In this game we have lighter-than-air craft battling over the skies of post-holocaust Africa. The "sky galleons" are paper-mache replicas of Napoleonic warcraft, save that they have forward-firing main batteries, upward-firing secondary batteries, steam propulsion, and double hulls filled with "fused helium." The guns are lasers, with firing power that decreases with range. The galleons maneuver vertically as well as horizontally, trying to cross an opponent's bow or stern (which allows a ship to fire both main and secondary batteries) or to fly overhead and drop ballast. Grappling and boarding rules are also included.

To quote Steve List: "For those who can swallow the "science" fiction background and overlook the absurd engineering it postulates, this can be a highly enjoyable game."

Let me briefly discuss the absurdly silly "science" of SKY GALLEONS:

* Wind, in a game about lighter-than-air ships, is only an optional rule! Even then, no attention is paid to attitude toward the wind.

* Ships which are supposedly steam-propelled must always move their entire movement allowance. Obviously, the throttle is a lost art in the future!

* By fiat, no collisions are allowed. But inventive grappling rules handle this problem. Is your galleon running head-on into an enemy? Just throw a grappling hook at him! You see, both ships lose all their velocity whenever they grapple . . .

* Which would lead to an unusual tactic – running your nose into a friendly ship and grappling, to keep from running out of range of the enemy – except that whenever you grapple, with FRIEND OR ENEMY, all guns go inoperative. And these guns aren't even Napoleonic, but laser cannon!

Plus, for all of us *Wooden Ships & Iron Men* fans, this game has *no* raking rules, and the game is sequential and not simultaneous. Which means that if an enemy flies overhead, drops its ballast, and flies away, my ship can't fire its upward-facing batteries because it wasn't my ship's turn! Flagrantly abusive, no?

Unfortunately, I have made the mistake of playing SKY GALLEONS. Several times, even. With its possibilities for vertical and horizontal maneuver, boarding, and dodging ground obstacles (those woods on the ground can really get you!) this is a fun and interesting game. Chalk one up for Playability over Simulation, but I have to say I liked it.

WAR OF THE SKY GALLEONS comes with a 17" by 22" three-color mapsheet, 24-page rulebook, mounted die-cut counters, and 2-color self-adhesive ship stickers (you have to mount these yourself) in a zip-lock bag; $5.50 postpaid.

WARRIORS OF THE GREEN PLANET is the most detailed of these games. It handles ground combat of the future, with such units as Laser Rifles and Cannon, Gunpowder units, Cavalry, Slash-and-Hack Melee units, Para-Psi Magicians, and the effects of Leaders on combat. The game comes with six charts. To understand the charts is to understand the game.

For instance, there is the Laser Fire Combat Table. Only laser-armed units use this. Range, size of the defender, or sheltering terrain are of no importance. You just total the number of lasers firing, roll a die, and see if you fried them. Lasers are the most powerful single units in the game.

Then there are the Range Attenuation Table, Terrain Effects Chart, and Gunpowder Fire Combat Table. All gunpowder units have a gunpowder attack strength and a range. For any attack, though, the attack strength will vary depending on the range – so you check the Attenuation Table.

Melee combat is the simplest. Adjacent melee units compare strengths (terrain can adjust defense strengths), roll a die, and check the Melee Combat Table.

Last of the Tables is the Spell Table. The Para-Psi Magicians may use their spell points to affect a battle by Time Manipulation (increasing or decreasing movement allowances), Illusions or Sight Magnification (increasing or decreasing firing accuracy), or Morale Manipulation (increasing or decreasing melee strengths).

An important aspect of WARRIORS is the Leaders. A Leader has both a Melee Bonus (added to units with which he stacks) and an Authority Range. For a unit to move at normal speed, it must be within range of a Leader. Leaders also reduce damage from gunpowder attacks by one notch. In most scenarios, Leaders can be the decisive element.

I must admit that WARRIORS is an overlooked gem among science fiction wargames. There are two problems: laser ranges were omitted, and rules for the use of tunnels in the Battle of Pacto' Pass are incomplete. In my play, I assume lasers have infinite range and ignore the tunnels.

WARRIORS OF THE GREEN PLANET comes with a 19" by 25" 3-color map, 20-page rulebook, and 2-color mounted die-cut counters, in a zip-lock bag, postpaid for $6.00.

Combining the Games

A special rulebook accompanies both MIND WAR and WARRIORS. It contains the rules for combining the three separate games into three different combinations.

MIND WAR/WARRIORS adds mind warfare to combat. The rules are simple and clear. The Para-Psi magicians from WARRIOR have a new spell – Challenge. If one magician challenges another, and the victim is unable to refuse or divert the challenge to another magician, the two magicians fight out their duel on the MIND WAR board. This is a nice idea, but it is left high and dry by the rotten nature of MIND WAR. You can combine the two games, but no one in his right mind would ever want to.

SKY GALLEONS/WARRIORS seems like it would be a great combination – men battling on the ground, while sky galleons maneuver overhead and drop soldiers behind the lines. The new rules provide for transportation and ground bombardment. There is just one large gaping hole, and it makes a person wonder if the rules for combining the games were written by the same person who designed the stand-alone games.

You see, the games are combined by combining all the turn phases from the two separate games and reassembling them into one long turn. Since the games are in the same scale – as the booklet points out – this all works marvelously.

Except that the games are not in the same TIME scale! One turn in WARRIORS represents 15 minutes. One turn in SKY GALLEONS is 3 or 4 minutes. It makes no sense to combine games without allowing for that factor. As it stands, there isn't a ground unit on the map that can't outrun a pursuing ship of battle!

There is another odd glitch having to do with laser weapons. In SKY GALLEONS, the laser power varies with distance, but the guns never break down. In WARRIORS, lasers do not vary with distance but do break down. So what happens in the combined game? Sky galleons shoot with their lasers at other sky galleons with SKY GALLEON rules, but fire at ground troops without range attenuation. Strange weapons, these. Meanwhile, ground lasers firing at sky galleons do so without any punch at all – a ground-based laser cannon firing at point-blank range is only as good as the worst possible shot a sky galleon could make.

In short, you cannot combine SKY GALLEONS and WARRIORS and come out with anything worth playing.

Lastly, in case you haven't guessed, putting all three games together is even more worthless. If neither of the two-game combinations work, the three-game combination has to be senseless.

In conclusion:

MIND WAR is forgettable.

WAR OF THE SKY GALLEONS is pretty stupid, but still a lot of fun.

WARRIORS OF THE GREEN PLANET is a challenging game of post-holocaust combat.

However, all three are stand-alone games. Combining them is a waste of time. Don't buy these under the impression that you'll get more play per dollar by putting them all together.

The WARRIORS OF THE GREEN PLANET TRILOGY comprises three games designed by Richard R. Jordison and published by Fact and Fantasy Games, PO Box 1472, Maryland Heights, MO 63043.

GAME MASTER

This month: Steve Jackson answers questions on OGRE and G.E.V.

"In OGRE, are the Ogre's antipersonnel guns the only things that can fire on infantry?"

–Numerous questioners over the past year

No. The AP guns do not work on any target EXCEPT infantry and the CP – but ALL weapons are effective against infantry. Nowhere in the rules is it implied that infantrymen are immune to shells and missiles.

"When G.E.V. is being used with OGRE, how many dice does a Mark IV Ogre roll when ramming?"

–Joel A. Breger, Arlington, TX

Roll 3 dice. The Mark IV is almost as large as a Mark V – but it is more lightly built, specializing in speed rather than heavy armor.

"In G.E.V.: (1) To what scale is the map drawn? (2) How long does a turn last? (3) Are there provisions for elevation and line of sight? (4) What can we assume a CP to be responsible for? Perhaps as a master tie-in for onboard computers? (5) How many rounds does each unit carry? How are reloads transported? How long does it take to reload? (6) How much fuel does each unit carry? (7) How are howitzers put on station in the first place?

–Kirk Brooks, Santa Fe, NM

(1) Each hex is 1,500 meters side-to-side. (2) Each turn is 4 minutes. (3) As you see in the rules, there are no elevation or LOS provisions. It is assumed that all units are capable of indirect fire on enemy units known to be present. (4) Good guess. The primary purpose of most CPs is to coordinate units so they can spot for each other and avoid enemy concentrations. (5) I've never worried about how many rounds a unit carries – and I don't intend to. G.E.V. is supposed to be a playable game, not a "monster." (6) I assume propulsion is by sealed atomic units. An AFV is not expected to survive long enough to require refueling. (7) Howitzers are transported by the same prime-mover units that tow mobile CPs.

GAME MASTER exists to answer questions on your favorite games. If you have a rules question or play problem, send it in. Questions to be answered will be chosen on the basis of general interest. They will first be referred to the game publisher or designer. If no response is received, GAME MASTER will offer its own interpretation of the rule. Sorry – no individual replies are possible.

CAPSULE REVIEWS

BELTER, published by Game Designer's Workshop; $11.98. Designed by Marc W . Miller and Frank Chadwick. Boxed, with one 12-page 8½" x 11" rulebook, a 22" x 28" map, 240 die-cut counters, two 8½" x 11" combat charts, and one die. Generally 2-4 players; playing time 2-8 hours or more. Published 1979.

BELTER is a game of asteroid mining in the year 2076. It is dangerous work, not only because of the hazards of the mining itself, but because of highjackers and ruthless competition. Players must buy ships, search the asteroids for a usable mine-site, extract the ore or gas (manually or by machine), and get it to the marketplace. Competition, piracy, and changes in the market will interfere with a player's plans. Accumulated wealth determines the victor.

The game is well-planned and nicely laid out; the map is simple and the rules very easy to understand. Players have a tremendous number of options at every point in the game, provided they have the money to carry them out. BELTER is more of an economic game than a battle game, though ships and men do get to fight every so often.

The worst problem with BELTER is that it can drag out, becoming repetitive – especially if you are in a pinch for cash and can't play actively for a while.

Overall, though BELTER is a very playable game and should be highly recommended to S-F players. A word of warning, though: if you are just getting into gaming, you might wait to play this game until you have more experience. BELTER can be a real challenge.

–Mike L. Maloney

BLOODTREE REBELLION, published by Game Designer's Workshop; $12.95. Designed by Lynn Willis (designer of *Godsfire, Olympica, Holy War, Lords of the Middle Sea*). Boxed, with 22" x 28" full-color map, several charts, 480 counters, and a 16-page 8½" x 11" rulebook. For 2 players; 4-6 hours long. Published 1979.

BLOODTREE REBELLION is about guerrilla warfare on an alien planet. Hexes represent 5 km; each turn takes 2 weeks. Powerful, high-technology Mykin government troops, aided by less powerful Petrochem Orionid militia, try to protect the cities and roads against guerrilla bands aided by the planet's natives. Important to the game is the political system. Players try to shift the Political Support Indexes through military and political actions, including assassinations, demonstrations, riots, and kidnappings.

Like Lynn Willis' other games, this has a detailed background for the planets and societies involved. Despite this, it retains a strong similarity to 20th-century guerrilla warfare, particularly Vietnam. One can mentally substitute helicopter gunships for gunplats, tanks for hovercraft, artillery for flex missiles and lasers, jungle for bloodtree forest, and rice paddies for tuber plains. In fact, BLOODTREE REBELLION is a more realistic simulation of the Vietnam war than any game yet produced about Vietnam.

The game is fairly complex and difficult to learn. The movement rules are full of special cases and exceptions, and the combat system involves several steps which are slightly different for specialized units, as well as a manpower register for losses of individual soldiers. A great many things affect political support, some in just one city and some in all three; these are hard to remember but very important. Players will have to constantly look through the rules for the first few games, since they have no cross-references and only occasional section headings. Solitaire play is next to impossible; you must find an opponent willing to learn.

Strategies are hard to plan. True to the nature of guerrilla war, the strategic aims for both sides are ill-defined, complex, and always changing. Moreover, many important game events, such as native entry into the war, are determined solely by chance.

BLOODTREE REBELLION is a game to be admired, not played. The political system is innovative and intriguing, the game and background are well-integrated, and guerrilla war is simulated very well. Those interested in these things will find the game interesting. Those who want a game to play over and over should look elsewhere.

–Keith Gross

CULTS OF PRAX, published by the Chaosium; $11.95. Designed by Steve Perrin and Greg Stafford. Supplement to *RuneQuest.* 112-page 8½" x 11" booklet. Generally 2-8 players; playing time indefinite. Published 1979.

CULTS OF PRAX describes 15 cults and the gods they worship. Gods are powerful and effective in a RuneQuest campaign; cults are a necessary part of both the social background and the magic system. Your friends and foes, your magic spells, and even the weapons you use may be determined by the cult(s) to which you belong.

Physically this is a very nice book – fully typeset, with a color cover and some interior illustration. The fictional adventures of a caravan trader appear throughout the discussions of the cults, counterpointing game-statistics with "real" examples of the groups and practices they explain. As to play value: I, myself, don't play RuneQuest – but this book would obviously give a RuneQuest GM literally months of enjoyment as he worked it into his campaign. For one who plays another game system, this would still be a useful book – the suggestions and ideas are beautifully worked out and could be translated into the terms of D&D, TFT, etc., easily. Especially interesting are the many new magic spells – some small and mundane, others quite powerful.

This book could perhaps have been improved by a slightly less scholarly writing style. The "textbook" nature of the cult descriptions make them somewhat confusing at first (even to an experienced RuneQuest fan; I checked!) On the other hand, this same textbook attitude gets a lot of data into a small space, and lends great verisimilitude to the game-world of Glorantha.

If you play RuneQuest, you want this book. If you are a *serious* Game Master in any fantasy system, you would do well to look it over. The CULTS OF PRAX philosophy is totally god-oriented. Similarly god-oriented GMs may find it useful; others will still find it interesting. And remember: Gods don't have to be *effective* to be *important.* Belief is the thing, and the interactions of social groups and differing beliefs in CULTS OF PRAX is good fantasy reading even if you don't game at all.

–Steve Jackson

WRITING REVIEWS FOR THE SPACE GAMER

Capsule Reviews

Most of the reviews we print will be "capsule" reviews – 400 words or less. We pay $5 for each capsule review accepted. We want to run a review for EVERY new sf or fantasy game or supplement. During 1980, we'll also accept reviews of older games.

Each capsule review should be five paragraphs long, and contain:

(1) Basic information. Present these facts, in this order: Name of the game; publisher; price; designer. (If applicable: "supplement to ———," "companion to ———," or similar note.) Format: list of components, with sizes of maps and rulebooks, number of counters, etc. Number of players; playing time; publication date.

(2) General description of the game: background, the sides, course of play, special features, etc.

(3) Strong points. Discuss what is good about the game; in every game; there IS something worthwhile. Don't try to be Pollyanna – just point out the game's successes.

(4) Weak points. Every game has its problems, too. If the only faults you can find are minor ones, say so. If the game is fatally flawed, come right out and SAY SO. If you can phrase your criticisms as suggestions for improvement, do so.

(5) Summation: your overall opinion of the game. Who should and should not buy it, and why.

All reviews must be signed; the reviewer's name WILL be printed. No game may be reviewed by its designer or by an employee of the publisher. (Designer's articles are welcome, but must be billed as such!) Final note: If you can write a complete review in less than the full 400 words, by all means do so.

This review format is designed to encourage fairness and to give the reader enough information to let him decide whether he wants to buy that game. Keep that in mind when you write. This is a short review, NOT a complete analysis. For those who want to write longer reviews, each issue will have one or two –

Featured Reviews

These will be game reviews 1,000 to 2,000 words long. They should contain *all the above information*, plus whatever else the reviewer wants to say. They may be written in any format. A featured review may cover either a new game or one that has been on the market for some time. If TSG has not already published a capsule review, write one, separately, and submit it at the same time. We may even use both.

TUNNELS & TROLLS, fifth edition, published by Flying Buffalo, Inc.; $8. Designed by Ken St. Andre; edited by Liz Danforth. 48-page 8½" by 11" booklet. Generally 2-8 players; playing time indefinite. Original text published 1975; this edition published 1979. (Note: FBI also offers a boxed version of this edition, selling for $12.95. It includes the rulebook, two dungeon adventure books, a set of 25 computer generated characters, three dice, and a pencil.)

TUNNELS AND TROLLS is a role-playing game. Originally a privately-produced "answer" to D&D, meant to simplify some of the die-rolling and add variety, T&T has grown into a fully realized game system in its own right. FBI publishes a number of supplements and solitaire adventures for T&T.

This edition is beautifully produced, snapping Flying Buffalo's long string of cheaply-produced games. It features a color cover by Danforth. The entire book is set in large, clear type, profusely illustrated. Organization is excellent – a great step up from previous editions. There are play examples throughout. At the back of the book are a weapons glossary and (wonder of wonders!) an index.

On the minus side is the combat system. It is somewhat improved from previous editions and/or *Monsters! Monsters!* – but it is still over-simple and inconsistent. Hero-types get the usual set of attributes, but monsters get just one "monster rating." The usual result of any combat is that the stronger side gradually whittles down the weaker, taking few or no injuries in the process. The game booklet itself suggests a couple of ways to solve this problem. GMs should use them, or think of their own. Another questionable spot is the magic system. Effects of spells are often roughly described rather than precisely defined (though T&T is *much* better than D&D in this regard). Many spells have disgustingly cute names. And, although most of FBI's T&T material features powerful and peculiar magic items, this book doesn't tell how wizards can make *anything* but a staff (and an "ordinary" one, at that.

On the whole, a good book, worth the price for any adventure gamer just for the ideas and comments it holds. A *must* for anyone playing T&T with an earlier edition. If you're thinking of getting into FRP adventure gaming, T&T is certainly the simplest AND the most simplistic system. Whether that's an advantage or a disadvantage is up to you.

–Steve Jackson

Games received for review (too late for this issue) were *Magic Realm* and *Wizard's Quest* (AH); *Sigma Omega* (Game Tech); *Traveller* and all supplements (GDW); *Uncle Ugly's Underground Doom, Dungeon of the Bear, Sorceror Solitaire, Sword for Hire, Arena of Khazan,* and *Goblin Lake* (Flying Buffalo); *OneWorld/Annihilator* (Metagaming); *Warlock* (Future & Fantasy); *Valkenburg Castle, Swordquest,* and *Intruder* (Task Force); *Tower of Illusion, Sword of Hope*, and *Temple of Ra* (JG).

NEWS & PLUGS

SPI's new science fiction/game magazine, *Ares*, has published its first issue. Contents included one micro-type game, *PlanetKiller*, about near-orbit tactical combat; two fictional pieces; several game reviews, and one fact article. Our copy came too late to write a formal review; general reactions, both at TSG and phoned from elsewhere, were "OK fiction, so-so article, good reviews, worthless game." We'll try for a full review next issue – but SPI is trying some new ideas out in this magazine. You should probably look at one copy and make up your own mind. Cover price is $3 – or see the ad on page 5 of this issue.

New releases from SPI include *Demons* (a game about treasure-hunting magicians in medieval Armenia, summoning evil spirits to aid them) and *Deathmaze* (which sounds like a standard enter-the-dungeon-kill-the-monster-find-the-treasure game). Both are billed as "Magic Capsules" in their Capsule Game series, available for $3.95 each softpack or $5.95 each boxed.

Upcoming SPI games include *Dragonslayer* (fantasy role-playing, $9.95, boxed, available June 1980); WorldKiller (the same game that appeared in *Ares* No. 1 – see above; $5.95, boxed, available February 1980); *TimeTripper* (a U.S. soldier in Vietnam travels through time, shooting at everything that moves; $5.95, boxed, available June 1980); *Pandora* (the crew of a spaceship fights monsters; $5.95, boxed, available April 1980); and *Against 4 Worlds* (strategic space battle with tactical module; $15, boxed, available June 1980).

Automated Simulations has announced a new fantasy software item. *Morloc's Tower* is a game program designed for use on the Commodore Pet (with at least 20K), TRS-80 (Level II, 16K), and Apple II (32K with Applesoft in ROM). $14.95 from Automated Simulations (PO Box 4232, Mountain View, CA 94040) or at computer stores.

Twinn-K (PO Box 31228, Indianapolis, IN 46231) has published a third book – *Moorguard* – in its *High Fantasy* series by Jeff Dillow. The cost is $5.

–Steve Jackson

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LETTERS

. . . Congratulations on your new position as publisher of TSG. We applaud your efforts in this field and encourage you to further heights of hobby generalism from the neutral publisher viewpoint. . .

Donald J. Greenwood
Editor, THE GENERAL (Avalon Hill)

. . . Let me correct the minor errors in the News and Plugs section of No. 25. While Task Force is a new company, and I am associated with it (as "Vice President and Chief of Design") I am not the head of it . . . Allen D. Eldridge (who was, by the way, Editor of *Jagdpanther*, not myself as was stated) is the President of the company . . .

. . . As for the review of STAR FLEET BATTLES in TSG 26 . . . my biggest gripe is its total inaccuracy. The speed of light is not represented as being 10,000 kilometers per second ANYWHERE IN THE GAME! It is represented as 10,000 kilometers per TURN, and the length of a turn is not stated. The reviewer also managed to parade his ignorance before everyone by presenting the "true" speed of light as 210,000 kps. When I was in school it was 186,000 miles, or about 298,000 kps. Sorry, Kenneth, but it hasn't changed.

While that is the biggest gripe, what makes me outright angry is Mr. Burke, with his own rapidly declining educational standards, changing the charts of the game without even trying to check his "corrections" with the publisher. The torpedo chart does indeed read "miss" for 0-1 range, AND THAT IS AS IT SHOULD BE! Has he never heard of "arming distances"? Pop a Photon at point blank range and YOU are going to take some of the blast.

It is traditional, when refuting a poor review, to claim that the reviewer has never played the game. In this case, it is obvious that Mr. Burke HAS played it . . . for no more than FIVE MINUTES! The impulse movement is tricky to get the hang of, but falls into place in a few minutes and becomes routine...

. . . Overall, I give STAR FLEET BATTLES, A REVIEW BY KENNETH W. BURKE, a "need for improvement" rating . . . I would recommend that you take a leaf out of Baron's book and start sending out the reviews for comment before publishing them.

. . . I have an interesting idea that I would like to present. Basically, it would involve me writing a column for TSG similar to Howard's. . . . It might be something that your readers would like, and it certainly couldn't hurt us . . .

–Stephen V. Cole
Task Force Games

OK, Steve. As to the Task Force report – you're on! We'll try one next issue and see if the readers like it. As to sending out reviews for comment . . . even if the companies responded quickly (and many wouldn't), that would drastically delay reviews of all new games. I'd really rather try to check them here, and risk an occasional unfair one, than have them ALL too late to do anyone much good. There's something about checking a review with the publisher that bothers me a little bit . . . And I think the new review format will make it harder to be unfair.

–SJ

. . . I would like to implore you to keep TSG game-related. I don't want fiction, too much art, or "cutesy" joke articles. If I wanted these things I would get other magazines. I get TSG because I am interested in SF & F games, and for no other reason . . .

–Robert Gutierrez (no address given)

. . . In No. 26, you printed some of my artwork on pp. 38-39 but neglected to give me any credit . . . I'd appreciate a correction . . .

Also, in your 1979 Game Survey, you left out "Villians and Vigilantes," a modern-day Superhero RPG from FGU, which is neither "marginally distributed" nor "low-rated," and about which I have a particular interest, being a co-author. I'd have liked to see how it rates....

–Jeff Dee, 212 Lakewood Dr., Cary, IL 60013

Thanks for writing. Corrections noted.
–SJ *–SJ*

CALENDAR

March 21-22: SIMCON II. Wargame con; Unisity of Rochester River Campus. Contact Box 5142 River Station, Rochester, NY 14627.

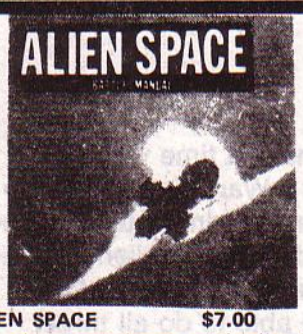
May 2-3-4: WV U-CON II. Wargame con; West Virginia University Student Union. Contact Bryan Bullinger, 240 McLane Ave., Morgantown, WV 26505.

May 23-26: GENGHIS CON II. Wargame con; Colorado Women's College, Denver. Contact the Denver Gamers' Association, 2527 Gaylord, Denver, CO 80205.

May 25-26-27-28: GRIMCON II. Fantasy and s-f con; Hyatt Edgewater Hotel, Oakland, CA. Contact Grimcon, 1749 Sonoma Ave., Berkeley, CA 94707.

June 20-21-22: STRATACON ONE. Wargame con; Vancouver, BC, Canada. Contact Allan J. Wotherspoon, 326 Greensboro Pl., Vancouver, BC, Canada V5X 4M4. Please include SASE.

July 4-5-6: NANCON III. Wargame con; Houston, TX. Contact Nan's Toys & Games, 1385 Galleria Mall, 5015 Westheimer, Houston, TX 77056; 713-622-0760.



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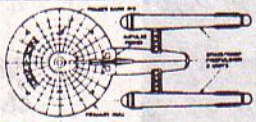

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Directions

It's FINAL EXAMINATION TIME. This test is NOT designed for the faint of heart.
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YOU ARE NOT TOTALLY PREPARED.

(Some of these questions are Trek-type, but don't let that discourage you)

1. What is Mr. Spock's first name?
2. What is the color of his blood?
3. What is his mother's and father's name?
4. Gary Gygax played the Gunga Din in "Sabu, the Elephant Boy Come Home". a. TRUE b. FALSE
5. Name two other Starships in the ENTERPRISE class.
6. What type of fuel does the ENTERPRISE use?
7. The best science-fiction game is?
8. What is *Scotty's* and *Bones'* real names on the show?
9. The next supplement for D & D will be "I was Frankenstein's Mother-In-Law". a. TRUE b. FALSE
   c. A GOOD POSSIBILITY
10. What is Kirk's middle name and what is his brother's name?
11. Who commanded the ENTERPRISE before Kirk?
12. Who played the communications officer before Uhuru?
13. What does the name Uhuru mean and in what language?
14. What is the name of the ENTERPRISE's shuttle craft?
15. RUNEQUEST is a fictional account of Danny Rune who was lost for 83 days on the NY City subway system.
    a. NO b. All of the above
    c. Never
16. How long and for what purpose is the Enterprise's voyage?
17. *Chivalry and Sorcery* was onece playedby Mr. Spock. (See question 3 above)
    a. In another life
    b. In another dimension
    c. In another show
18. *TUNNELS and TROLLS* is a. road map of Lake Geneva
    b. a new game show hosted by Bert Parks
    c. Hugh Hefner's newest mansion
19. The best fantasy role-playing game made is?
20. D & D originally began as a real-life version of Monopoly played in Atlantic City. a. TRUE
    b. TRUER
    c. TRUEST
21. The best science-fiction game is?
22. TRAVELLER is the true-life story of a nerd who took a local Greyhound bus from Sparrow's View, Tenessee to Rio Del Plata, Texas.
    a. TRUE b. FALSE
    c. I didn't know that
23. The only place to get any game – role-playing, fantasy, science-fiction, military simulation is? The Compleat Strategist
24. Where do gamers from all over the world meet to exchange answers on this test (don't call it cheating ! !) The Compleat Strategist

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EARTHLINGS –

Please note three things about this ad.
(1) The figure is shown four times actual size. Believe it or not, it's really in 15mm scale. Like that detail? So do we . . .
(2) This is a quality magazine, as earth magazines go – but it's STILL upside down. Our ad, as usual, is right side up.
(3) The gostak distims the doshes.

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